

NPDES Report for the Period January 1 to December 31, 2001
Pierce County, Washington
Submitted March 2002

This report describes the ongoing activities of Pierce County in fulfillment of the requirements of the National Pollutant Discharge Elimination System (NPDES) and State Waste Discharge General Permit for discharges from municipal separate storm sewers (MS3s) for the South Puget Sound Water Quality Management Area, and the portion of the Kitsap Water Quality Management Area located in Pierce County.

Assessment of Stormwater Program Needs

Water Programs continues to update the 1991 James M. Montgomery CIP study by doing detailed Basin level planning studies. In 2001, the first three plans (Muck Creek, Gig Harbor and Clover Creek) completed the Phase 1 basin characterization process and started compiling CIP recommendations. Two additional basins (Clear/Clarks Creek and Lower-Puyallup) were started late in the year. 2001 Expenses: \$770,100.

Endangered Species Act Activities

Pierce County employs a Special Project Coordinator to deal with habitat protection and restoration issues related to ESA. The coordinator has been involved in the following initiatives:

Tri-County

A voluntary coalition of tribes, local governments, business community, and environmental agencies formed a group to see what we could do together to add in habitat protection and restoration issues. It started as a response to the listing of Chinook and bulltrout as threatened under the Endangered Species Act. It evolved into a multi-species (salmonids) recovery effort.

A model for compliance with National Marine Fisheries Services 4(d) Rule was developed. It included sections dealing with land use, stormwater, and road maintenance. In addition, it had sections on adaptive management, habitat restoration, and recovery planning.

Land Use section

The land use section focused on using best available science to identify sensitive areas and establish protective measures. The goal is to encourage development in the areas with the least potential for environmental harm and to establish prescriptive measure for all areas. The model establishes buffer widths, impervious surface thresholds, native conditions standards, and develops comprehensive planning policies to guide all land use planning.

Stormwater section

This section is a comprehensive, integrated program of planning, regulation, capital projects, and education designed to better protect and restore salmon habitat from the impacts of past and future development. It is designed to achieve both ESA and Clean Water Act objectives. It addresses issues such as flow and duration issues, water quality, inspection standards, and construction best practices.

Road Maintenance section

This section addresses the issues faced by local government's road crews, utility crews, maintenance of stormwater facilities and other right-of-way structure maintenance. The program emphasizes an outcome based approach. It also relies on best management practices (BMP) that are organized by outcome category. In general, the BMPs are designed to provide erosion and sedimentation control through minimizing soil exposure, stabilizing disturbed areas, minimizing runoff, and sediment retention.

The other three sections of the model are designed to help address existing problems and to keep it an updated product. Those are the adaptive management section, the habitat restoration component, and the recovery planning on a watershed scale.

The model is complete and is currently undergoing a biological review.

Pierce County

On a local basis, Pierce County has undertaken a thorough review of almost all of the land use/land related regulations and programs to see if they adequately address habitat protection and restoration issue. Amendments have been drafted and will be taken through the legislative process in 2002. The issues identified include those in the Tri-County model in addition to updates on stormwater control, flood management, low impact development guidance, and critical areas (seismic, volcanic, landslide, mines).

Funding was provided by Pierce County to address several habitat initiatives. One of the projects was a joint venture with the Pierce Conservation District for a major culvert replacement project. The new facility not only allows for fish passage but addresses sedimentation problems. Another project was an analysis of all of the stream reaches within Pierce County. It was done using a computer modeling system known as the Ecosystem Diagnosis and Treatment Methodology (EDT). The result is a data base that identifies by stream reach the habitat condition based on 43 attributes. These are attributes such as water quality, quantity, sedimentation, vegetation, and species' presence. The results of this work will be the basis of identifying ongoing habitat protection/restoration priorities.

State

The Washington State legislature mandated the development of a "comprehensive monitoring strategy and action plan for measuring watershed health with a focus on salmon recovery." (SB5637) While work began on this initiative in 2001, it will be completed in 2002. As a representative of local government's efforts I have been participating on the development committees.

Pierce County spent \$1,098,631 on ESA activities in 2001.

Habitat Protection and Restoration Package

As mentioned above in the ESA section, part of Pierce County's response to ESA has been a thorough review and proposed update to many of our land use regulations. This activity took place throughout 2001, and is due for its first public hearing on April 10, 2002. The following brief summaries and appendix give a brief description of proposed changes:

Overview of Habitat Protection and Restoration Package

Title 17A - Site Development & Stormwater Drainage Regulations

- Developed new Low Impact Development Chapter
 - This Chapter allows an alternative method of handling stormwater on a site
 - Increases the predeveloped condition from existing condition to pre-European settlement condition (e.g. either forested or prairie)
 - Emphasizes disconnection of impervious surfaces and direction of stormwater runoff into small, dispersed controls such as bioretention areas (rain gardens), bioswales, and created wet ponds that mimic natural wetlands
 - Encourages 65% vegetation retention on site in order to achieve stormwater management goal and objectives
 - Requires all critical areas and their associated buffers be set aside in separate tracts
 - Includes tree protection standards during construction and long-term maintenance requirements
- Repeals Chapter 17A.50 Floodplain Management
- Amends Chapter 2 & 4 of the manual to clarify the engineering and geotechnical requirements for construction on slopes greater than 30%
- Amends Chapter 3 with new glossary terms

Title 18-General Provisions

- Created a new Chapter 18.25 to provide a unified definitions chapter (note: this also includes companion amendments to other Titles where definitions are being stricken)
- Added new language to the Compliance Chapter:
 - Added resource management biologists and site development inspectors to those staff authorized to enforce violations
 - Added new language which enables to the County to require the removal of illegal fill, structures or facilities (such as on-site septic systems)

- Added new language that authorizes the County to file a Notice of Non-Compliance on the title of any property containing a violation and criteria for removal of such notice
- Added new language for civil penalties (note this language already exists in Title 17A but is not currently accessible for use in the Title 18 series)
- Amended Chapter 18.20 Introduction to update the code citations

Title 18A-Zoning Code

- Establishes limits on total impervious surface and vegetation removal in rural areas

Title 18D - Environmental Regulations

- Repeals Chapter 18D.30 Environmentally Sensitive Areas as this term is no longer used in the SEPA WACs and these areas are now adequately protected through the Critical Area Regulations
- Amends Chapter 18D.40 to update the documents used for substantive authority

Title 18E-Critical Area Regulations

- Repeal 18E and readopt new code
- Completely rewritten based upon best available science in conformance with WAC 365-195-900 through 925
- Clarified the agricultural activity definition and associated exemption language
- Expanded the Exemption section.
- Wetlands Chapter
 - Formalized a number of wetland review procedures and policies previously provided in various documents (e.g. mosaic delineation methodology, use of County Wetland Rating Form, One-Family Wetland Certification Form, Conversion Option Harvest Plan wetland review).
 - Expanded the hydrology requirements associated with mitigation plans.
- Critical Fish and Wildlife Chapter:
 - Significantly increased required buffers along freshwater and marine water bodies (lakes, ponds, rivers, streams, Puget Sound shorelines)
 - Created a new section on Species of Local Importance with additional species to be considered critical
 - Expanded the Habitats of Local Importance roster to include Biodiversity Management Networks, heron rookeries, and cavity duck nesting habitat.
 - Expanded the regulated status of Oregon white oak
 - Created a hierarchy of habitat assessment processes
 - Established mitigation requirements and procedures.
 - Established buffer reduction guidelines
 - Created new standards for critical habitats (adjacent to watercourses and water bodies and Oregon white oaks)
- Erosion Hazard Chapter:

- Created a new erosion hazard chapter with restrictions on getting approval for a proposed hard armoring method of shoreline erosion protection (e.g. concrete bulkheads).
- Requires the submittal of a shoreline erosion geotechnical report for all proposed regulated activities within 200 feet of the ordinary high water mark, which will evaluate whether active erosion is occurring.
- Established a no build for active shoreline erosion hazard areas, a 50 foot buffer requirement, and created a shoreline erosion hazard management area.
- Established a no build for active landslide hazard areas, increased the buffer requirements and created a landslide hazard management area.
- Expanded the floodway to include channel migration zones which have been applied to certain rivers and streams in Pierce County that have demonstrated active channel movement
- Created a new fault rupture hazard area category in the seismic chapter and established a no build zone and buffer
- Created time travel zones within a volcanic hazard areas and restricted allowable uses within these areas
- Prohibited certain uses within the aquifer recharge/wellhead protection areas
- Created new definitions
- Established new exemption thresholds for certain activities
- Eliminated nonconforming rights for uses in flood hazard areas and active landslide hazard areas

Title 18H-Forest Practice Regulations

- Repeal 18H and readopt new code
- Developed a new tree conservation chapter, which requires a minimum percentage of trees be retained or replanted on a site. This Chapter also includes tree protection standards during construction and long-term maintenance requirements.
- Relocated some administrative procedures within the code
- Modified criteria for approval of Class IV forest practices to ensure consistency with state law.
- Modified criteria for Class IV forest practices, conversion option harvest plans, and single-family dwelling exceptions to improve administration and consistency and to close unanticipated regulatory loopholes.
- Created new definitions

List of Appendices Included in the Habitat Protection and Restoration Package

Title 16, Subdivision and Platting Regulations

- Amendments to Chapter 16.02.20 Definitions (Title 16 definition strikeout.doc)

Title 17A - Site Development & Stormwater Drainage Regulations

- Amendments to Title 17A Regulations (Title 17A, Site Development and Stormwater Drainage.doc)

- Amendments to Chapter 2, Site Development and Stormwater Management Manual (Chapter 2 Stormwater Manual.doc)
- Amendments to Chapter 3, Site Development and Stormwater Management Manual (Chapter 3 Stormwater Manual.doc)
- Amendments to Chapter 4, Site Development and Stormwater Management Manual (Chapter 4 Stormwater Manual.doc)
- Creates a new Chapter 10, Site Development and Stormwater Management Manual (Chapter 10 Stormwater Manual.doc)

Title 18-General Provisions

- Amendments to Chapter 18.20 - Introduction (Chapter 18.20 - Introduction.doc)
- New Chapter 18.25 (Chapter 18.25 - Definitions.doc)
- Amendments to Chapter 18.140 - Compliance (Chapter 18.140 - Compliance.doc)

Title 18A-Zoning Code

- Amendments to Chapter 18A.15 Definitions (Title 18A definitions strikeout.doc)
- Amendments to Chapter 18A.35 - Landscaping (Chapter 18A.35 - Landscaping.doc)

Title 18B-Signs

- Amendments to Chapter 18B.10.020 Definitions (Title 18B definitions strikeout.doc)

Title 18D - Environmental Regulations

- Repeals Chapter 18D.30 Environmentally Sensitive Areas and amends Chapter 18D.40 to update the documents used for substantive authority (Title 18D - Environmental Regulations.doc)
- Amendments to Chapter 18D.10.040 Definitions (Title 18D definitions strikeout.doc)

Title 18E-Critical Area Regulations

- Repeal existing 18E and readopt new code (Title 18E - Critical Area Regulations.doc)

Title 18H-Forest Practice Regulations

- Repeal existing 18H and readopt new code (Title 18H - Forest Practice Regulations.doc)

Title 18I-Natural Resource Lands Regulations

- Amendments to Chapter 18I.10.050 Definitions (Title 18I definitions strikeout.doc)

Title 18J-Design Standards and Guidelines

- Amendments to Chapter 18J.10.030 Definitions (Title 18J definitions strikeout.doc)

Title 20-Shoreline Management Regulations

- Amendments to Chapter 20.04 Definitions (Title 20 definitions strikeout.doc)

Low Impact Development

As mentioned above, Pierce County has been working on a Low Impact Development Ordinance as part of our ESA response. A brief summary of activities is included below:

- Work on Low Impact Development Ordinance Description - This work involves drafting new low impact development (LID) chapter in the existing Pierce County Stormwater Manual. This new chapter will provide guidance on using low impact development techniques to manage stormwater from new development.

Progress - The new LID chapter, drafted in year 2000 and 2001, was revised based on comments from Pierce County staff. A Goal and companion objectives for achieving an LID design are included which need to be demonstrated through the use of a combination of prescriptive standards. It is anticipated that the ordinance will go before the Pierce County Council in June of this year.

- Conceptual Low Impact Development Design Description – Work on a conceptual design for a low impact development in Pierce County has progressed in cooperation with Washington State University Cooperative Extension and AHBL Engineering. Pierce County staff has completed a conceptual design for a LID in the urban area. This design achieves densities of approximately four du/acre on a difficult site that contains critical areas and poor soils. This design will be used to illustrate a good LID design to developers and County staff.

Progress - The site layout for the conceptual LID design is complete and the hydrologic modeling for the design has been adapted to comply with the new Department of Ecology (DOE) methodology, which is laid out in the 2001 Stormwater Manual. Pierce County staff conducted an initial meeting with DOE staff to discuss LID techniques and their incorporation into the WWHM model. Pierce County will be requesting another meeting with DOE staff to provide them with the results of the hydrologic modeling done for the conceptual design and to discuss the need for additional stormwater credits to be given for LID techniques. If the DOE accepts these credits the parameters within the WWHM model would be adjusted to more accurately reflect the retention of stormwater by the LID techniques, which would ultimately reduce the volume of storage required in detention ponds.

Wetlands Banking

In the Water Programs Division, only minor work occurred on this project this year. A consultant evaluated the enhancement of various County-owned

properties, but no commitment was made to doing enhancement in advance of need. 2001 Expenses: \$7,000.

For the Transportation Division, this has been a slow year in the wetland mitigation/banking area. We had no mitigation or banking sites constructed in 2001. Monitoring of current mitigation sites took approximately one month. Endangered Species Act (ESA) biological assessment work utilized approximately 1/4 FTE (an Environmental Biologist 1 position).

Capital Improvement Program

Construction of North Fork Detention Pond. This large (80 acre-feet) detention pond is designed to limit storm flows in the creek, holding excess flows until the storm has passed, and then releasing the stored water slowly. This project, in coordination with another large pond completed in 1999, will reduce the frequency and severity of flooding through out the Clover Creek system. Wetland planting and other items will keep this program active for 2-3 more years. 2001 Expenses: \$2.7 million

Elevation of 136th St. E. between 'A' St. & 'B' St. Frequent closure of this road due to flooding has blocked access to an entire neighborhood. The roadway has now been raised above the 100-year floodplain. Habitat enhancement planting associated with this project will occur in 2002. 2001 Expenses: \$327,200.

Construction of 192nd St. & 22nd Ave. Infiltration Pond. This low-lying area has flooded frequently in the past, affecting several homes in the area. This project was designed for future conditions to accommodate anticipated development. 2001 Expenses: \$320,300.

Completion of the South Hill Pump Station. Built to address several separate flooding problem areas in the South Hill area, this project will pump excess stormwater to the Puyallup River. The station is fully automatic and includes an emergency power generator to provide continuous service. 2001 Expenses: \$4.38 million.

Land Acquisition for future CIP. Several properties were purchased in preparation for future ponds. 2001 Expenses: \$465,000.

Other Work. In addition to the projects listed above, the CIP division is working on the design of numerous projects for future projects.

Total 2001 CIP Expenses: \$8,679,368

Activities in Support of Total Maximum Daily Loads (TMDL)

In 2001, Pierce County Water Programs continued normally scheduled activities in the Clover-Chambers basin (containing Steilacoom Lake) such as industrial/commercial inspections, response to complaints and concerns,

educational activities, Stream Team monitoring and planting activities, and basin planning activities. The Pierce Conservation District has taken over coordination activities for the Clover Creek Watershed Interim Council for implementation of the Clover-Chambers Watershed Plan.

As Ecology is aware, EPA vacated the phosphorus portion of the Steilacoom Lake TMDL in February 2002. A meeting sponsored by Ecology was held in March 2002 to get stakeholder input regarding available data and potential data gaps needing to be filled in order for Ecology to do an effective TMDL in 2003 or 2004. Pierce County has stated their willingness to be involved in the development of the new TMDL. Any special reporting requirements or actions under the current NPDES permit are now null and void with the vacation of the phosphorus portion of the TMDL. Pierce County and Ecology remain defendants in a lawsuit filed by the Steilacoom Lake Homeowners Association.

Ecology requested no additional assistance in their analysis of the South Prairie Creek TMDL in 2001. Ecology collected additional data in the Lower White River TMDL and the Puyallup TMDL. Pierce County contributed \$530 toward the long term monitoring efforts in the Puyallup, as agreed to in the Puyallup River TMDL Mediation Agreement. We also offered the use of H₂O's toward this effort.

Pierce County is a participant on the City of Puyallup committee for the Clarks Creek/Meeker Ditch TMDL.

River Activities

Land Acquisition

Nine (19) separate riverine land parcels were purchased for a purchase cost of \$1,450,000. The total land area of purchases is 65.4-acres. Five of the parcels contained house structures which were demolished and hauled away as part of the acquisition. The parcels will be kept as permanent open space and allowed to revert back to natural conditions.

Repetitive Flood Loss Property Acquisition

Pierce County Water Programs completed acquisition of six repetitive flood loss properties in the lower reach of the Clear Creek tributary system. The project included removal of six house structures and outbuildings (including detached garages) from the lots, abandonment of wells/septic systems and final restoration. The cost of the project was \$1,308,551 in which the County received a grant from the FEMA Hazard Mitigation Grant Program in the amount of \$1,200,000, and the County provided a 12.5% match. The sites will remain as open space in perpetuity. The County is pursuing additional funding to continue its efforts to acquire remaining repetitive flood loss properties (about 20 properties). The program is strictly voluntary.

Floodplain Map Modification

Work continued on the floodplain map modification project. This project is the result of FEMA designating the county as a Cooperating Technical Community (CTC) and awarding a grant in the amount of \$40,000. The project will allow the county to update its current community floodplain mapping using much more accurate base topographical mapping the county recently produced as part of its orthographic photo mapping project. The project is focusing on updating the existing FEMA mapped 100-yr floodplains for numbered A-zones and lakes. This includes thirty-one (31) stream tributaries and eight (8) lakes. The project will continue through 2002.

The County is also working with FEMA on another floodplain mapping project whereas FEMA is funding re-mapping/study of up to fourteen (14) major river and creek tributaries. The re-mapping project will include new basin hydrology and hydraulic modeling for the subject rivers and creeks. This will produce a new 100-year flood inundation map with new computed base flood elevations.

The project is a step further from the above described CTC mapping project. The CTC mapping project does not include new hydrologic and hydraulic modeling and mapping work

Salmon Recovery Grant Program – State Interagency Committee for Outdoor Recreation

The purpose of this grant is for the acquisition of riverine floodplain property to protect and preserve salmon habitat within the riverine riparian corridor. The grant funding amount is \$1,600,000. The project commenced in 1999 and was completed in December 2001.

This project ultimately resulted in the acquisition (in fee simple title ownership) of 103 acres of floodplain property along the left bank of the Puyallup River between River Miles 21.80 and 23.0. This included eight separate parcels in which some of the acquisitions were full parcel and partial parcel purchases.

Protection and preservation of salmonid fish habitat will result thereby providing needed fish overwintering, refuge and rearing habitat. Eventually, the acquired floodplain land may be opened up by removing and setback the existing levee allowing natural river meander and migration within the floodplain corridor.

FEMA NATIONAL FLOOD INSURANCE PROGRAM - COMMUNITY RATING SYSTEM

Pierce County applied for and was verified into the Community Rating System (CRS) in October 1995. At the time of enrollment, the County was verified as a Class 8 CRS Community. The county was not content with this rating and expanded its programs and activities to earn more creditable points and ultimate rating over the next five years. The primary reason being for the benefit of residents and cost savings to those purchasing flood insurance.

Upon re-verifying in the CRS program for October 2000, Pierce County successfully re-verified in the CRS program as a Class 5 community. Pierce County is the first county in the nation to attain a Class 5 rating! This entitles property owners who purchase flood insurance to a 25% premium reduction.

Some of the activities that the county earned much credit for include the following:

- A.) Elevations Certificates including computer format/database
- B.) Map Information – publicizing the service in the regional phone book
- C.) Outreach Projects – production of a video titled “As the Waters Rise”
- D.) Flood Protection Assistance
- E.) Open Space Preservation – land acquisition with setback levee projects
- F.) Higher Regulatory Standards
- G.) Flood Data Maintenance
- H.) Stormwater Management
- I.) Acquisition and Relocation
- J.) Drainage System Maintenance
- K.) Floodwarning

Pierce County has completed a Repetitive Loss Plan due to its recent classification as a Repetitive Loss Community. The plan addresses how it will manage repetitive loss flooding areas and how it will work towards reducing (if not mitigating) flood damages to the subject properties that are located in three geographical areas of the county for a total of twenty-four properties that were classed as repetitive loss. The plan was adopted by the County Council in November 2001.

The county continues to strive in implementing new activities and programs all for the benefit of the residents for unincorporated Pierce County and to reduce flood losses within the community.

FLOODPLAIN REGULATIONS

Pierce County Water Programs has developed and prepared a draft set of revised floodplain regulations as part the overall project to update and amend the current Critical Areas Ordinance, as part of the County’s response to ESA from the recent listing of the salmonid species as threatened. The floodplain regulations will be integrated as a critical areas regulation rather than through the Stormwater Management and Site Development manual. The proposed regulations have more stringent development standards than the current in that new requirements will not include channel migration zones, zero rise criteria, more stringent criteria for Deep and/or Fast Flowing water (floodway), minimum house elevation criteria, etc. The draft Critical Area Ordinance is now going through public review and comment. The regulations as proposed will reduce flooding impacts to people and property and help to reduce water quality impacts within floodplains.

Watershed Planning

Both the Clover/Chambers Creek and Kitsap/Gig Harbor/Islands (KGI) plans were adopted by the Pierce County Council. The Upper Puyallup Watershed Plan has been drafted and is currently going through public review.

Puyallup River Watershed Council and Action Plans

Last year some time was directed toward the implementation of the Lower Puyallup Watershed Plan, with an emphasis on Pierce County assigned responsibilities. This probably totaled no more than 120 hours of work. The major portion of the watershed planner's time was directed at the completion of the Upper Puyallup Watershed Action Plan. This included extensive research, writing, and working with the committee to create a watershed plan that address all of the known sources of non-point pollution in the watershed. This amounted to about 2250 hrs of staff work. This does not include volunteer committee time.

Typically, 2 to 4 staff members assisted or were involved with the Puyallup River Watershed Council once per month. Two staff members attended special PRWC committee meetings at least once per month. These two activities totaled about 100 hours of staff time for the year.

Chambers/Clover Creek Watershed Council and Action Plan

Watershed Planning staff time devoted to this effort included 2 individuals attending 6 meetings with possible a couple of special meeting during the year. Very little time was spent on implementation of the Watershed Action Plan.

Key Peninsula, Gig Harbor, Islands Watershed Council and Action Plan

During 2001 assigned staff probably spent one quarter of her time coordinating the interim Council and working on implementation of the Action Plan. Plan concurrence was also a major undertaking last year.

Other General Watershed Planning Activities

These might include public speaking, setting up for fairs and attending fairs, attending special meetings, preparing short papers on topics related to issues of interest to Watershed Councils or Water Programs or the general public. This might total \$35,000.

Controlling Runoff from New Development and Redevelopment

The Development Engineering Section is responsible for ensuring that development and redevelopment occurs in accordance with the requirements of the County's Stormwater Management and Site Development Ordinance. The following is a breakdown of our staffing for the year along with the percentage of time spent by each employee implementing the requirements of the ordinance:

- A.) We employed four CE2 engineers for the entire year. These employees reviewed the designs of proposed road, storm drainage, clearing, and

impervious surface type-projects for compliance with the County's Stormwater Management and Site Development Ordinance. Seventy-five percent of their time was spent implementing the ordinance requirements.

- B.) We employed one CE2 engineer for the entire year. Forty percent of this employee's time was spent reviewing the designs of proposed road, storm drainage, clearing, and impervious surface type-projects for compliance with the County's Stormwater Management and Site Development Ordinance. The other fifty percent of this employee's time was spent handling complaints and violations related to stormwater, erosion, filling, and flooding. Ninety percent of this employee's time was spent implementing the ordinance requirements.
- C.) We employed four ET3 inspectors for the entire year who performed erosion control inspections and permanent BMP inspections on road, storm drainage, commercial, subdivision, and industrial-type developments. Eighty percent of their time was dedicated to implementing the ordinance requirements.
- D.) We employed two and one-half ET3 inspectors for the entire year to perform erosion control and drainage inspection on single family home construction. One hundred percent of their time was dedicated to implementing the ordinance requirements.
- E.) We employed one and one-half ET3 inspectors for the entire year. One hundred percent of these employee's time was spent investigating, documenting and resolving potential violations of the ordinance requirements.
- F.) We employed two and one-half ET3 counter technicians for the entire year to assist single-family building permit applicants in implementing necessary storm drainage and erosion control BMPs that are a requirement of the ordinance. Seventy-five percent of these position's time was spent implementing the ordinance requirements.
- G.) We employed one CE1 for the entire year. This employee reviewed the designs of proposed road, storm drainage, clearing, and impervious surface-type projects for compliance with the County's Stormwater Management and Site Development Ordinance. Seventy-five percent of this employee's time was spent implementing the ordinance requirements.
- H.) We employed two OA2 office assistants and one part time office assistant for the entire year to provide support for CE2, CE1 and ET3 staff. Fifty percent of their time was spent providing support to staff for issues relating to ordinance implementation.

- I.) We employed two part time extra hires last year. Ninety to one hundred percent of their time was spent implementing the ordinance requirements.
- J.) We employed one Development Engineering Supervisor for the entire year. The supervisor was responsible for directing staff in the implementation of the ordinance. Approximately thirty percent of the supervisor's time was spent on issues related to ordinance implementation.
- K.) We employed one Development Engineering Inspection Supervisor for the year. The supervisor was responsible for directing staff in the implementation of the ordinance. Approximately seventy percent of the supervisor's time was spent on issues related to ordinance interpretation.
- L.) We employed one engineer for the year on an extra hire basis to review plans. Seventy-five percent of this position's time was spent implementing the ordinance.
- M.) We retained four engineering firms for the entire year to assist in plan review. Eighty percent of these firm's time was spent implementing the ordinance.

The Development Engineering Section expended approximately \$1,490,000 during 2001 implementing the Stormwater Management and Site Development Ordinance. This number reflects an increase of approximately a half a million dollars over our expenditures from 2000. This is due primarily to an increase in outsourcing of our reviews to contracted engineering firms and increased inspections of single family construction. It is also due to an increased percentage of time being spent per employee in implementing the ordinance requirements. The majority of projects that we work on are no longer vested under older stormwater ordinances.

The Code Enforcement Section of the Planning Department is responsible for investigation and enforcement of numerous County ordinances, and they act as the central clearinghouse for complaints. The Code Enforcement Section supports implementation of the Stormwater Management and Site Development Ordinance by fielding telephone calls and initiating the documentation of complaints pertaining to storm drainage, erosion, sedimentation, and flooding. One employee from Code Enforcement spent twenty percent of his/her time performing these activities. In 2001 the Code Enforcement Section expended \$8,600 supporting the Development Engineering Section in enforcement of the ordinance requirements.

In 2001, approximately 6,400 site development permits were approved. The number of permits in 2001 is almost double the 2000 permits due to an increase in erosion and storm drainage inspections in the single family construction area. A site development permit is required whenever proposed construction triggers certain thresholds for the amount of clearing, amount of excavation, or amount of

proposed impervious surface. These 6,400 permits covered projects as small as erosion control and storm drainage inspection for single-family home construction on up to stormwater conveyance, quantity, and quality facilities for subdivision or commercial project construction.

A total of 11,474 inspections on permitted projects were performed. This number reflects erosion control inspections, storm drainage system (conveyance, quality, quantity) inspections, and excavation inspections for single family, subdivision, commercial, and industrial projects. These 11,474 inspections can be further characterized as follows:

- 11,013 of these inspections were associated with projects permitted under the County's Stormwater Management and Site Development Ordinance.
- 9,169 of these 11,013 inspections were associated with single-family residential construction for both temporary erosion control and permanent drainage provisions. The remaining 1,844 were associated with commercial, industrial, short plat, formal plat, and large lot projects.
- 5,476 of the 11,013 total inspections required in association with the Stormwater Management and Site Development Ordinance were of temporary drainage and erosion control measures. The remaining 5,537 pertained to permanent site grading, drainage and site stabilization requirements.

In 2001 the enforcement arm of the Development Engineering Section received requests to investigate 330 problems/requests pertaining to drainage and erosion control. The following is a breakdown of the nature of these problems/requests:

- 282 – filling and grading
- 21 – flooding of private property
- 3 – flooding related to development
- 6 – blocked culverts
- 2 – blocked ditch
- 3 – flooding over roadway

Of these 330 problems/requests thirty eight were on permitted sites, and twelve were not violations. Currently these problems/requests are in various stages of resolution. One hundred and ninety six of these problems/requests have been resolved. One hundred and twenty-two of these problems/requests are still awaiting a field inspection.

A review of our program indicates that the following areas are still problematic:

- Maintenance of temporary erosion control facilities on single family residences by contractors/ builders.
- The County is still struggling to meet State-mandated turnaround times. In an attempt to meet these turnaround times, the quality of the review, and thus,

the quality of the end product is sometimes sacrificed. This situation still exists even with the additional 2001 expenditures for increased staff time and outsourcing to contracted engineering firms.

- There are potentially a large number of violation sites that go unaddressed as we currently only respond to complaints, and there are violations that do not draw complaints.
- Bringing violation sites into compliance.
- Actual implementation of temporary erosion control measures by contractors in a timely fashion, especially when inclement weather is due.
- Implementation of the Annual Scope of Work portion of the Stormwater Management and Site Development Ordinance.
- Getting contractors to use the construction entrance on residential projects.

To summarize, the amount of time dedicated to ensuring that proposed designs for drainage and erosion control meet the requirements of the new manual greatly increased in 2001 when compared to 2000. The amount of inspections pertaining to the new manual also greatly increased in 2001. Additional staffing and funding to address NPDES issues was not approved in the 2002 budget. It is therefore our anticipation that our 2002 expenditures will be equal to 2001.

Groundwater and Shellfish Protection

The Tacoma-Pierce County Health Department's Environmental Health Program activities in 2001 that related to the NPDES Permit included:

- The Environmental Health Program conducted a Recreational Shellfish Program in 2001 with financial and technical assistance from the Washington State Department of Health. Activities conducted included public education and Paralytic Shellfish Poison (PSP) monitoring and notification. Program staff continued participation in an innovative and collaborative effort, initiated by the Washington State Department of Fish and Wildlife, to better work with and educate the Asian-Pacific-Islanders (API) community on recreational shellfish issues. This work included contracting with the Korean Women's Association for API youths to assist with PSP monitoring and educating the community about general shellfish issues. **FTE: 0.15 COSTS: \$12,200**
- In its fourth full year of operation, the On-Site Sewage Operation and Maintenance (O&M) Program now has more than 9,500 on-site sewage systems in the program. These include single- and multi-family residences, community systems, commercial buildings, and food service establishments. Systems in the program are required to be inspected on a regular basis, with most systems being inspected every three years. Complex systems and those with a high strength wastewater flow must be inspected every year. System as-built drawings, brochures and other information has been distributed to system owners and users as part of a program to increase awareness of septic system issues. Also, staff are working on a grant that is expected to help increase coverage of the program. **FTE: 4.25 COSTS:**

\$380,000

- The Environmental Health Program completed a project in 2001 to map the Group A water system wells and their associated Wellhead Protection Areas in Pierce County. A GIS layer with the wells and the Wellhead Protection Areas was developed for land use management and spill response purposes. This GIS layer was incorporated into Pierce County's GIS system, *Countyview*, and is available to all the county departments and a number of the incorporated cities. **FTE: 0.2 COSTS: \$8,000**
- The Environmental Health Program conducted a bathing beach sampling program during the summer of 2001 to assess health concerns to swimmers at seven public swimming beaches. Sampling was conducted every other week over the summer for water temperature, pH, conductivity, fecal coliform concentrations, number of water fowl present, and number of swimmers present. The action level used generally follows the Environmental Protection Agency's guidelines for E coli, with a recommendation against swimming being issued if the geometric mean value of five or more samples was greater than 126 coliform forming units (cfu)/100ml or when two consecutive samples exceeded 406 cfu/100ml. The water quality results were good enough that no recommendations were issued by the TPCHD in 2001 against swimming at any of the public beaches. **FTE: 0.1 COSTS: \$8,000**
- The Long-Term Ground Water Monitoring Program had a successful year in 2001, with better consistency in data reporting, the addition of more wells into the program, and the completion of a program progress report. The program continued to record water quality, water level, and production data from approximately 140 wells throughout Pierce County and also track precipitation at a number of locations in the county. A summary of the data collected to date was included in the progress report. The report was quite extensive and was put onto a CD. **FTE: 1.5 COSTS: \$120,000**
- The Environmental Health Program continued working on the Chambers-Clover Management Plan Project. This project, which is being conducted in three phases, will develop a comprehensive water plan for the Chambers-Clover Creek Watershed (WRIA 12). The project is building upon previous planning projects in the watershed and will work in close coordination with Pierce County's ongoing NPDES permit program, the Endangered Species Act response effort, and the nonpoint pollution control efforts (WAC 400-12). As of the end of 2001, the Planning Unit was approximately 60% finished with the second phase of the project. Most of the work on the Technical Assessment is being performed by a team of consultants. **FTE: 0.2 COSTS: \$110,000**

- The Environmental Health Program conducted shellfish protection work through funding from Pierce County Public Works and Utilities and through grants. An Interagency Agreement was signed in 2001 between the TPCHD and Pierce County Public Works and Utilities, providing funding to the TPCHD for shellfish work through at least 2003, and, if the program is successful, through 2005. Work conducted in 2001 included contaminant source identification and correction work in Oro Bay and in Henderson Bay, taking the lead role on the Filucy Bay Shellfish Closure Response Team, providing information on shellfish issues at fairs and events, and working on both the Burley Lagoon On-Site Repair Project and the Shellfish Watersheds Protection Project. The Burley Lagoon On-Site Repair Project was completed this year. Over the course of the project, 106 on-site sewage systems were dye tested and nine failing systems were identified and corrected. The Shellfish Watersheds Protection Project began in 2001 and is conducting sanitary survey work in three shellfish watersheds on the Key Peninsula. **FTE: 1.9 COSTS: \$150,000**
- The Environmental Health Program Code Enforcement staff responded to 904 solid waste complaints in 2001. The type of response varied, depending upon the nature of the complaint. The responses included telephone calls, correction letters, and field inspections. A total of 1,219 correction letters were sent out to violators and/or property owners and 1,487 site inspections were conducted. Twenty-five cases were referred to the Prosecuting Attorney for charging, two Health Orders were issued to property owners requiring them to clean up their solid waste, and 34 citations were issued for solid waste violations. **FTE: 3.0 COSTS: \$179,000**
- The Environmental Health Division continued implementation of Local Hazardous Waste Management Plan activities. These projects address "small quantity generator" (business) and household hazardous wastes. Work in 2001 included collaborating with the City of Tacoma and Pierce County on four hazardous waste collection events; these events enabled 987 area residents to properly dispose of their hazardous wastes. Four additional used oil collection tanks were placed at area transfer stations; these sites received almost 10,000 gallons of used oil in the period July - December, 2001. Work on the EnviroStars program, recognizing businesses for outstanding hazardous waste management practices continued; approximately 30 new businesses received EnviroStar designation during 2001. The Hazardous Waste Line continued operation throughout 2001, receiving 4,500 calls during 2001. **FTE: 1.8 COSTS: \$166,000**
- The Environmental Health Program required surface water quality monitoring at several permitted solid waste handling facilities in Pierce County in 2001. The required water quality monitoring varies from stormwater discharges at industrial recycling operations to in-stream monitoring at municipal solid waste landfills. Additionally, stormwater run-on and run-off controls are

required at all solid waste handling facilities in an effort to prevent negative impacts on water quality from the operation of these facilities. The requirements are imposed on the facilities through their conditional solid waste handling permits. The FTEs and costs are very difficult to estimate because the above work is only one component of a much more comprehensive program.

Coordinated Water System Plan

During 2001, Water Programs reviewed water system plans for consistency with the Pierce County Coordinated Water System Plan, processed requests for water service area adjustments, processed one "timely and reasonable service" dispute and participated in the community planning process currently being implemented by Pierce County Planning and Land Services. Staff has participated in the Central Puget Sound Water Supplier's Forum. The Forum is a cooperative effort of water suppliers and counties formed to address water supply planning, ESA response, water resource issues and public information needs regarding water supply. The Forum produced a Regional Water Supply Outlook and a Drought Response Plan during 2001. Water Programs also participated in "2514" watershed planning occurring in the Chambers-Clover Creek, Nisqually and Kitsap WRIAs. In July 2001, the Washington State Department of Ecology granted the Pierce County Water Utility, formed in 1999, a change in purpose and place of use of a portion of its water rights associated with Chambers Creek Properties. During 2001, the Water Utility also applied to DOE for a new groundwater right. During 2002, the Water Utility will develop a water general plan thus allowing the Water Utility to wholesale its source of water to interested Pierce County water purveyors.

Annexations, Incorporations and Exemptions

There were no incorporations in Pierce County in 2001.

Annexations were quite minor in 2001, with a loss of stormwater fee revenue amounting to only \$5,364.14.

You will notice a huge increase in the amount lost to exemptions over previous years. This is due to refinements in our ability to track smaller exempt parcels, and to the inclusion of the 85% exemption given to County roads and WSDOT. Exemptions included churches, granges, community centers, tide lands, Indian Trust Lands, cemeteries, parks, Federal lands, and roads. The amount exempted was \$1,273,297.

Change in Water Quality Status of Waterbodies

Water Programs has worked cooperatively with TPCHD and Pierce County Conversation District to eliminate pollution sources in both the Rocky Bay and Burley Lagoon watersheds. Due to these efforts, Burley Lagoon has been partially re-opened for shellfish harvest and we have been notified that Washington State Department of Health will be upgrading Rocky Bay before the

end of the year. Filucy Bay on the Key Peninsula was downgraded for commercial shellfish harvest in August 2001, and Pierce County passed an ordinance creating a watershed protection district in February 2002. Actions have been underway since the middle of 2001 to improve water quality in Filucy Bay. Oro Bay on Anderson Island, and Vaughn Bay and Dutchers Cove on the Key Peninsula are potentially at risk for downgrade, and are being monitored by the Washington State Department of Health and the TPCHD.

Industrial Inspection Program

Water Programs hired one additional inspector (for a total of 2) in January 2001. This more than doubled our inspection frequency. A total of 490 site visits were done. This includes visits to sites categorized as a particular land use type in our Assessor's database, but when we arrived at the site, nothing was there. A list of all sites visited is located in Appendix 1.

Maintenance agreements for new businesses, industries and developments as required by our Stormwater Manual were shifted from PALS to the Water Quality group. We logged them into our inspections database starting in 2001. Inspections of these facilities will begin in June 2002. There are currently 123 affected properties.

Our inspectors worked cooperatively with Ecology inspectors on a number of cases (we do not track these separately). Typically, the Ecology inspector calls our inspectors when a non-emergency problem has been reported in the County, and our personnel check out the report and do a site visit, following up with Ecology. We did have one large fuel spill (250 gals) which Ecology should have handled. Ecology instead asked County Road personnel to clean it up, and that the County would be reimbursed. County personnel cleaned it up, and when it came time for reimbursement, Ecology said they could have paid a contractor to clean it up, but they couldn't pay us. Based on this experience, in future similar incidents, we will probably close the road, and wait for Ecology to send a contractor for clean-up.

Water Programs inspectors responded to 4 water quality complaints called in directly to the County. Of these, one was closed with resolution, 2 were closed without resolution, and 1 was closed as a non-problem.

Monitoring Program

As you are aware, 2001 was a severe drought year in Washington. However, as basin plans closed their data collection phase by consultants, Water Programs Water Quality Section staff stepped in to do long-term monitoring at many of these sites, thus increasing our workload to a great degree. The variety of types of monitoring also expanded.

Groundwater level monitoring in support of Capital Improvement Projects continued monthly throughout the year. Frequencies were not stepped up as a

result of the drought. We also took over 13 Department of Ecology piezometers in the Muck Creek Basin.

Precipitation monitoring at five stations within the County continued throughout 2001. Our tipping buckets were replaced with heated tipping buckets in most locations, and we added reliable phone download capability to most stations. Our raingauge data is now available on the Internet.

Biological Index of Benthic Integrity (BIBI) monitoring was done in twenty nine creek segments in 5 basins across the county.

Flow and temperature monitoring for 3 basin plans (Muck Creek, Clover Creek and Gig Harbor) were turned over to County staff, and monitoring started in the Clear/Clarks and Mid-Puyallup basins.

Fecal coliform monitoring in connection with the shellfish downgrades at Rocky Creek, Filucy Bay and Burley Lagoon were conducted as storms were available in 2001.

Water Programs also monitored 3 Snotel systems for snowpack during the winter months.

A table of monitoring sites is listed in Appendix 2.

As required each year, personnel did an end-of-pipe check on each outfall in unincorporated Pierce County during the dry summer months. The table of locations and results is in Appendix 3.

Education Program

Most of the resources described in the education program can be broken down into four funding categories.

Water Resources Education: \$123,000

Household Hazardous Waste Collection Programs: \$173,000

Solid Waste/General Environmental Education & Outreach: \$464,000

Illegal Dumping and Prevention Outreach: \$206,000

Total Expense: \$966,000

Source of Funds

Pierce County Water Programs & Sewer Utility: \$140,000

Pierce County Solid Waste Division: \$543,000

Department of Ecology Coordinated Prevention Grant & Centennial Clean Water Fund: \$283,000

The preceding excludes:

1) The cost of the yard waste collection and composting systems (described herein); and

2) Management, administration or oversight costs associated with the Water Resources Education and Solid Waste/General Environmental Education programs.

Environmental Education Overview

We have 4 educators on staff to provide education and resources to Pierce County residents. In 2001, our educators gave classroom presentations, guided field studies, provided consultation services, workshops, training, loaned educational resources and equipment, and were invited to community events. Over 600 outreach efforts reached over 16,000 Pierce County residents.

A description of the resources referenced above follows:

Classroom Presentations

A selection of environmental presentations is provided for K-12 classrooms, home schoolers, scouts and day camp participants. Each presentation is designed to actively engage students in the topic by encouraging students to discuss the kinds of choices they can make to reduce waste and prevent pollution.

The following presentations were offered:

No Time to Waste

The presentation focuses on where our garbage goes, the elements of a modern landfill, and practical techniques for reducing the amount of garbage that is landfilled (i.e., recycling, pre-cycling and composting) are discussed. Students receive brochures on these topics and teachers are provided with additional curricula and background materials.

Compost Critters

This presentation goes more in-depth about composting, both yard waste and worm composting. Students identify the critters that aid in composting and what food scraps are appropriate to place in a worm bin.

Hazards in the Home

This presentation covers household hazardous products and their alternatives. Students will understand terms on a product label, and how hazardous chemicals can enter our bodies and the environment. Proper disposal and product alternative information is derived from a hazardous waste information wheel.

Bite of the Finite

A role playing game that introduces students to the finite nature of natural resources, as well as the uneven worldwide distribution of these resources. Students simulate mining forays to gather mostly metal resources, and after spending time and energy doing this, find that most of these resources end up in landfills.

Water In, Water Out

A new presentation introduces students to water basics--the water cycle in reference to our water use--tracing the path of our household water from aquifer, use, discharge and treatment. Students learn about septic systems or wastewater treatment plants, depending upon what system is used in their school area.

Water We Doing?

Students switch perspective from human to salmon in this presentation to discover how our everyday activities may affect aquatic wildlife. Ways to reduce nonpoint pollution and establish simple, good habits are discussed. Students receive handouts and teachers receive curricula on water topics.

Watersheds and You

This interactive program exposes students to the dynamics of land and water that define a watershed. They learn about human activities that affect watershed processes that are vital to our community's ecological health. Students and teachers receive materials on water topics.

Benthic Macroinvertebrates

Students learn about aquatic bugs, the roles they play, why they're important, their life cycles, and why they are water quality indicators. The presentation can include using cards to learn about metamorphosis, and viewing either preserved or live samples.

Field Investigations

Because it is easier to teach about the environment when you can get people outdoors interacting with nature, our educators provide opportunities for students, teachers and citizens to participate in field work and stewardship activities. Students learn how to collect and test water samples for a variety of pollutants. They discover how to assess the health of a stream by studying the kinds of aquatic insects they find in it. And they learn that observing things at the site is one of the best techniques for gaining information. Most consultations are for some type of field work and planning.

ADULT WORKSHOPS

Project WET and Project WILD: aquatic Workshops

These workshops are offered to teachers and other youth instructors. The two national curriculum guides are filled with hands-on, water-related activities that

provide opportunities to learn about all aspects of this valuable resource, and to encourage investigation into local issues. In 2001, one workshop was held with ten teachers attending. The workshops provide the teachers with both curriculum guides.

GIS Workshops

These workshops are also for teachers and curriculum directors. Pierce County Environmental Services partnered with Pierce County Information Services to initiate the Geographic Information Service (GIS) workshops in 2000. In 2001, only a few small classes were offered to specific schools. ESRI, Inc., the maker of ArcView software, has allowed Pierce County to make available to school districts older versions of the software as Pierce County purchased updated versions. The software combines the power of a database with the visualization capabilities offered by maps. Workshop participants receive a CD with existing County data, but creating their own data allows users to interact with the maps more significantly than just adding or subtracting existing layers of data.

Worm Composting

This workshop was offered thirteen times in 2001 through Tacoma Community Colleges in Tacoma and Gig Harbor, as well as through a Tacoma Community in Schools program. Each session attracted from 15 to twenty participants who learned how to set up and maintain a worm bin to reduce kitchen waste. The resulting worm compost can be added to the soil as an organic fertilizer, reducing the dependence on chemical fertilizers and pesticides, and helping to retain soil moisture.

OTHER OUTREACH EFFORTS

Educational Resources and Equipment for Loan

Thirty-one educators, students and citizens checked out various resources Pierce County Environmental Services has available. Among the resources checked out were videos, water quality testing kits, macroinvertebrate sampling kits, and activity kits such as storm drain stenciling kits, "The Incredible Journey," and the groundwater model.

Benthic Index of Biological Integrity (B-IBI)

The B-IBI is a sampling method to assess water quality using biological indicators, namely, benthic macroinvertebrates. Partners in this endeavor in 2001 included the Pierce Conservation District, Pierce County Water Programs, the Puyallup Tribe, and two consulting firms. Water Programs became the lead agency for this program and has incorporated it into its overall monitoring program. Seventeen streams were sampled in 2001.

Western Washington Fair

The Pierce County Solid Waste Division's GreenHouse incorporated more water conservation displays into the house and landscaping in 2001. Two water collection systems were shown: a simple rain barrel and a water collection cistern

for roof runoff. Also displayed were drip irrigation systems and micro-sprinklers, as well as the water- and electricity-saving home appliances shown annually. Approximately 200,000 of the 1.4 million fairgoers walked through the exhibit.

Puyallup Spring Fair

Pierce County Solid Waste Division and organizations from both the public and private sector came together to bring fun, interactive, hands-on activities, to educate people about some of today's most pressing environmental issues. The 7,400 square foot exhibit included the Environmental Shopping Game, the Environmental Wheel, the game Who Wants To Be A Recycler?, and the Salmon Survival Game, where participants travel downstream towards Puget Sound as salmon fry and encounter many of the ways in which people unknowingly degrade water quality and salmon habitat. Children of all ages created spring hats and worm bins from recycled items. Our sustainable home setting featured products made from recycled materials, energy-efficient appliances, and compact fluorescent lights. The exhibit also featured natural gas and electric vehicles. The 40' Greenscape showcased native and drought tolerant plants, included tips to create a water-efficient landscape and displayed a mulching mower, compost bins and much more. New participants this year included Pierce County Road Operations, Water Programs, and the Master Gardeners. The Puyallup Spring Fair was attended by more than 90,000 people.

Pierce County Solid Waste Newsletter

The newsletter is sent out to 199,000 single-family and multi-family residences in Pierce County twice each year. Topics included increased waste oil recycling sites, other household hazardous wastes, the benefits of compost tea, grasscycling, helping stop littering and illegal dumping, and information about the County's plans for reducing flooding problems. The newsletter will continue to be a valuable way to get information about water issues to Pierce County citizens.

Household Hazardous Waste Management

Pierce County and the City of Tacoma continue to partner in the collection of household hazardous wastes. County residents have access to Tacoma's permanent facility. In addition, Pierce County partnered with Tacoma and the Tacoma-Pierce County Health Department to provide four satellite household hazardous waste collection events in Steilacoom, Key Center, Eatonville, and the Bonney Lake/Buckley area. These efforts resulted in collecting 182,280 pounds of materials from 4,557 residents in 2001.

Household Hazardous Waste Information Line

(253) 798-4115

Our automated phone line gives information on how to safely dispose of hazardous household wastes in Pierce County. In 2001, 363 people used the phone line as a resource.

Yardwaste Composting Program

Pierce County provides curbside collection and self haul options for yard waste. In 2001, the County's contractor processed 46,267 tons of yard debris. The resulting compost is available at local landscaping supply companies.

WEBSITE INFORMATION

The Green Book

This directory of environmental education opportunities in Pierce County is becoming known as a valuable resource for formal and informal educators who are planning environmental curricula and are looking for speakers, resources, and field trips. The Green Book includes sections on Ecology & Habitat, Zoos and Parks, Natural Resource/Waste Reduction, Water, Watershed Groups, Volunteer Opportunities, and Teacher Resources. In 2001, the fifth edition of the Green Book went on-line and is now on the County's Environmental Services website (see below). A number of directories were printed and distributed to schools, libraries and agencies in Pierce County.

Environmental Services Website --

www.piercecountywa.org/services/home/environ/index.htm

Pierce County Environmental Services now provides a variety of information on its website. All of the separate departments within Environmental Services list their programs, their plans, and their ongoing efforts to keep water clean. They also provide opportunities for citizens to participate in these efforts with information and links to volunteer organizations and planning groups. The website provides tips on how individuals can reduce their impacts on the environment: information on nonpoint pollution, alternatives to hazardous products, green gardening, and where to recycle difficult wastes such as construction/demolition debris and automotive oil and anti-freeze.

Operation and Maintenance of Stormwater Facilities (Water Programs)

Pond Maintenance

In 2001, 91 ponds were maintained. Maintenance activities include, but are not limited to, clearing, grading, sloping, excavation, vegetation management, mulching, fencing, hydroseeding, and trash control. Also, 22 Control Manholes (Flow Restrictor/Oil Pollution Control Device aka FROP) were vactored and cleaned of pollutants. All waste was properly disposed of at a permitted facility. Total cost was \$641,034.

Creek Maintenance

In 2001, crews performed maintenance on a number of creeks in unincorporated Pierce County. The work consisted primarily of vegetation management and/or silt removal from designed traps. The work was performed by County maintenance crews, as well as our District Court Probation/Detention crews at a cost of \$59,355.

Drainage Concerns

Drainage concerns called in to the County's Flooding and Storm Drainage Concerns phone number (253-798-4274) are entered onto the Service Response System database, and delegated to the proper department for action. The numbers listed below reflect only complaints handled by Water Programs.

Please see **Operation and Maintenance of Streets and Roads** and **Controlling Runoff from New Development and Redevelopment** for the SRS information for Roads and PALS. Water Programs handled:

201 drainage concerns logged

154 visited

149 closed

17 closed without resolution

47 remain active

Small Works Projects

Water Programs Maintenance Section conducts a Small Works Program for projects that are in need of attention, but too small to qualify as regional facilities under our Capital Improvement Program. In 2001, \$150,223 was spent on these projects to improve storm drainage conveyance and improve water quality.

Vegetation Control (Riverine Area)

Vegetation control is multi-benefit. We must keep access-ways clear of unruly and/or non-indigenous vegetation for maintenance crew activities, as well as for avoidance of structural damage to the levee and flood abatement structure. This work must be accomplished with compliance to Tribal agreements and regulatory codes, while also maintaining vegetation that is conducive and beneficial to the fisheries resource. This work continues on a yearly basis.

In Summer 2001, the full crew was dedicated to pulling and disposing of noxious weeds along the Puyallup River System.

Detention Crew

In 2001, Pierce County Water Programs utilized jail crews to assist in pond clearing and brushing, trash pickup, demolition and disposal of floodprone homes and property, fence construction, creek and ditch clearing and/or enhancement. The total cost was \$85,000, with an actual man-hour value of \$195,744.

Operation and Maintenance of Streets and Roads

Material Transfer Facilities: 5 material transfer facilities have been completed to separate, test, and recycle solid wastes generated in everyday maintenance activities. Materials such as wood, concrete, asphalt, sweepings, ditching and excavation wastes, and vector solids have been managed to monitor waste generation and test material for use as a recycled material. Material bins are managed to safely store materials and manage stormwater runoff from the containment areas until materials can be reused.

Vegetation Management: The Pierce County program has begun implementation of GPS technology into the spray contracts to more accurately track applications. The current system tracks chemical types applied, width of application, speed, and location on a 1.5 second interval. Better coordination with mowing and brushcutting programs have shown a decrease in broadleaf application quantities in 2001.

Endangered Species Act: Pierce County Road Operations has functioned as a co-lead for the Regional Road Maintenance ESA Guidelines efforts with National Marine Fisheries Service and the US Fish and Wildlife Service. The Guidelines have been finalized and approved by the Services for road maintenance activities to contribute to the protection of aquatic habitat and water quality. These guidelines provide a basis for implementation of Best Management Practices, proper maintenance sequences, focus on protection of aquatic habitat, and in turn, the endangered aquatic species. The guidelines require the following in order to obtain the 4(d) maintenance exemption under the Endangered Species Act:

- 1 Regional Forum
- 2 Program Application Review Process
- 3 Formal Training Program
- 4 Adaptive Management
- 5 Research
- 6 Compliance Monitoring
- 7 Habitat Data Collection within the right-of-way
- 8 Emergency Response
- 9 Biennial Reporting to NMFS and USFWS
- 10 Best Management Practices for Maintenance Activities

Training: With the requirements of the Regional Road Maintenance ESA Guidelines, training is one of the 10 elements that is required to obtain the 4(d) maintenance exemption. A maintenance training program has been developed with the University of Washington to train the following areas:

The Regional Road Maintenance ESA Guidelines

- 1 Maintenance Project Design and BMP's
- 2 Maintenance Project Permitting
- 3 Maintenance Project BMP monitoring and responsibilities
- 4 Field Crew BMP Implementation and Responsibilities
- 5 Train the Trainer Courses for Technical Class Tracks
- 6 Train the Trainer for Field Crew Courses

Work Order System: Pierce County Road Operations is developing a proactive work order approach to road maintenance functions. Drainage systems are managed and inspected on a subsystem level. Utilizing the latest in GPS/GIS

technology and incorporating Personal Data Management computers, drainage systems are inspected, assigned maintenance, prioritized, reviewed for engineering and environmental concerns, and maintained by work order. In 2001, 40 percent of all road maintenance activities were conducted by this proactive approach. In 2002, Pierce County Road Operations expects 60-70% of maintenance work completed by inspection generated work orders. The benefits of this program are being seen in a reduction in citizen generated complaints. A summary of our maintenance functions is provided below:

2001 MAINTENANCE FUNCTIONS

Please note: This was our first full year operating under the ESA rules

FUNCTION	Measurement	PLANNED	ACTUAL	\$\$ SPENT
Ditching with backhoe	Ditch feet	28,661.0	6,800.0	\$82,034
Ditching with drott	Ditch feet	6,800.0	1,160.0	\$19,853
Beltloading	Ditch mile	68.9	58.3	\$114,695
Manually clean culvert ends	Each	9,118.0	3,719.0	\$28,360
Mechanically clean culvert ends	Each	1,062.0	196.0	\$5,159
Grate tops cleaned	Each	2,078.0	2,221.0	\$13,657
Mechanically clean catch basins	Each	4,995.0	1,662.0	\$122,886
Jet rodding	Lin. feet	117,491.0	68,708.0	\$126,834
Repair/replace culvert pipe	Lin. feet	4,105.0	4,279.0	\$212,567
Repair/replace catch basin	Labor hour	759.0	126.0	\$94,240
Repair/replace drywells	Labor hour	801.0	52.0	\$62,188
Erosion control repair	Labor hour	1,176.0	2,817.0	\$46,017
Holding ponds	Each	10.0	25.0	\$22,904
Ditching with Ditchmaster	Ditch mile	275.0	79.0	\$188,272
Misc. drainage repair	Labor hour	6,458.0	24,430.0	\$1,032,398
Self contained street sweeping	Cntr. lane mile	3,374.0	3,025.0	\$280,458
Litter removal	Labor hour	3,668.0	5,794.0	\$249,334
				\$2,701,856

Roads Drainage Concern Activity- SRS Service Response System: With changes in the focus of Road Operations in 2001, we have seen a drop in citizen

generated complaints in 2002. In 2000, we had 101 complaints through the SRS system that were addressed by Road Operations with 40 situations corrected. In 2001, we had a total of 148 addressed by Road Operations with 76 situations corrected. In 2002, we have seen a downward trend as we implement the inspection and work order maintenance program.

2000 Total = 101

Blocked Culverts	31%
Blocked Ditches	15%
Failed Drainage System	3%
Flooded Roadway	21%
Trash and Debris	1%
Private	14%
Other	15%

2001 Total = 148

Blocked Culverts	43%
Blocked Ditches	23%
Failed Drainage System	0%
Flooded Roadway	42%
Trash and Debris	0%
Private	26%
Other	14%

Vactor Stations: Pierce County Road Operations has completed the first of three planned Vactor Decant Facilities. This facility was developed in coordination with the Pierce County Health Department to properly control, test, and recycle vactor wastes generated by our maintenance activities. The second station is scheduled for completion in the spring of 2002.

Watershed-wide Coordination Activities

The Phase 1 permittees continued to meet as necessary to discuss permit drafts and issues. Pierce County continued to be active in all aspects of the Tri-County process, and we are lead entity for the 2496 salmon recovery process.

Watershed councils are active in all watersheds in the County. County personnel also participate in the 2514 process.

Adequate Information to Conduct Planning, Priority Setting and Program Evaluation Activities

Mapping. Water Programs and GIS Division staff utilized a FEMA Cooperating Technical Community (CTC) grant to re-study riverine and creek 100-year flood plains. This study is currently being reviewed by FEMA mapping contractor, Michael-Baker & Assoc. Utility funds continued to support the drainage system inventory and periodic aerial re-flights of the County.

Water Programs continues to employ one technician working full time on maps for drainage inventory, CIP projects, basin plans, watershed plans, monitoring sites for water quality and water quantity, and for special projects or requests. Water Programs also continues to pay a large share (>300,000) to the GIS Division for upkeep of GIS coverages. This does not include upkeep of the new drainage maps, which are nearly complete. Discussions are underway between Roads and Water Programs as to personnel and funds needed to field check and map new features (public and private facilities) as they are built.

Pesticide Management

Fertilizer and Pesticide Use

2001 showed Pierce County Parks and Recreation continuing to improve in the tracking and recording of fertilizer and pesticide usage. There are still even more improvements that we expect to make in our recording process.

Even prior to the enactment of the Stormwater Program in 1997, we began to make the commitment to use appropriate materials as minimally as we possibly can, and more importantly, as professionally as we possibly can. We do this while still fulfilling our mission "to provide well maintained and functional park facilities". We plan to continue that commitment.

We spend significantly more time and money in training in this particular area than in any other area of our profession.

Our profession and material suppliers continue to work hard at improving materials, standards, techniques, etc.

As professionals in an industry that is most often over-scrutinized in this area we take very seriously the stewardship of our facilities and their use and enjoyment by all of the public we serve.

A table of our training activities follows, and a table of our application practices and chemical usage is in Appendix 4.

PIERCE COUNTY PARKS - 2001 TRAINING

<u>Training Received</u>	<u># Hours</u>	<u>Course Cost</u>	<u>Salary</u>	<u>Total Cost</u>
Pesticide Classes				
Parks employees (10)	160	700.00	27.09	5,034.76
Golf Courses (5)	72	420.00	28.01	2,436.58
Grounds (4)	72	315.00	21.35	1,852.02
Cost of Study Materials		71.73		71.73

PIERCE COUNTY PARKS - 2001 TRAINING

**Integrated Plant Health
Management (pesticide credits)**

Erin Benedict	24	150.00	25.71	767.04
Gerald Olson	24	150.00	24.33	733.92

**Athletic Field/Sport Turf
Workshop**

Bret Schuler	8	75.00	21.58	247.64
Eddie Sanchez	8	75.00	21.58	247.64

**Northwest Turfgrass Assoc
Conference**

Andrew Soden	24	814.78	35.05	1,655.98
Toby Lirot	24	388.60	25.71	1,005.64
Scott Tyson	24	388.60	25.71	1,005.64

**PACE Turfgrass Research
Seminar**

Andrew Soden	16	596.58	35.05	1,157.38
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**Washington Turf & Landscape
(Pesticide credits)**

Andrew Soden	16	110.00	35.05	670.80
Derald Randall	16	55.00	25.71	466.36
Jeff Donovan	16	55.00	25.71	466.36

WWGCSA Crew Seminars

Andrew Soden	24	90.00	35.05	931.20
Toby Lirot	16	90.00	25.71	501.36
Rick Lewis	16	90.00	11.00	266.00
Eric Olsen	8	40.00	8.00	104.00
Jeff Melvard	8	40.00	25.71	245.68

TOTALS	576			\$19,622.04
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Conservation Futures Program

The Conservation Futures Program consists of moneys collected from each property in the County to purchase and preserve noteworthy properties.

The Pierce County Conservation Futures Citizens' Advisory Board reviewed property nominations, and makes the following findings and conclusions:

Project Name	Findings and Conclusions
Number 1: Foothills Trail Meeker to McMillin	
Sponsor	Pierce County Parks and Recreation
Title to be held by	Pierce County
Parcel size	Approximately 116.67 acres, 4 miles in length)
Parcel number	Meeker to Mc Millin railroad right-of-way in sections 04-19-1; 12 ,13 & 04-19-20-25; 26;36
Property location	Along East Pioneer Way outside of Puyallup
Current use	Active rail line and farming
Open space attributes	Fish and Wildlife, Streams, Wetlands, Agricultural Lands, Aquifer Recharge areas, Flood Hazard areas, Seismic hazard area, Volcanic hazard area
Other attributes	Project area is greater than five acres; Matching monies are available
Conclusions	Public acquisition would add to the County's regional trail system and link the Puyallup trail to the regional trail.
Acquisition cost	The project sponsor is seeking \$600,000 as a match for additional funds
Number 2: West Milton Nature Preserve	
Sponsor	City of Milton
Title to be held by	City of Milton
Parcel size	Approximately 0.76 acre
Parcel number	599020-0070
Property location	604 5 th Avenue in Milton
Current use	Abandoned residential
Open space attributes	Critical Salmon Habitat, Fish and Wildlife, Streams, Wetlands, Agricultural Lands, Aquifer Recharge areas, Flood Hazard areas, Seismic hazard area
Other attributes	Project area is within the city's UGA, property price reduced to \$17,000
Conclusions	Public acquisition would protect the riparian

Project Name	Findings and Conclusions
	habitat
Acquisition cost	The project sponsor is seeking \$17,000 as a pre-negotiated price
Number 3: Sehmel Homestead Park	
Sponsor	Pierce County Parks and Recreation
Title to be held by	Peninsula Park and Recreation District
Parcel size	Approximately 32 to 64 acres
Parcel number	01-22-35-4-039, 040,700
Property location	Off of 78 th Avenue Northwest
Current use	Agricultural, Residential Subdivision pending
Open space attributes	Fish and Wildlife, Streams, Wooded areas, Wetlands, Agricultural Lands, Aquifer Recharge areas
Other attributes	Project area is greater than five acres,
Conclusions	Public acquisition would protect the wetland habitat and provide open space
Acquisition cost	The property owner is willing to sell just the open space areas. The seller has not suggested a price however, the assessed value for the entire 100 acres is \$686,100. When the assessed value is divided by the estimated available funds of \$1,500,000, the assessed value represents 45% of the total available funds.
Number 5: Future River Bend Park	
Sponsor	City of Sumner
Title to be held by	City of Sumner
Parcel size	Approximately 12 acres
Parcel number	04-20-01-4-003
Property location	Off of 16ht street on the west side of the White River
Current use	Vacant undeveloped White River flood plain
Open space attributes	Critical Salmon Habitat, Fish and Wildlife, Streams, Wetlands, Aquifer Recharge areas, Flood Hazard areas, Seismic hazard area, Volcanic hazard area
Other attributes	Project is within the city's UGA and is greater than five acres
Conclusions	Public acquisition would protect the riparian and salmon habitat
Acquisition cost	The City of Sumner, Sewer Utility has not suggested a price however, the assessed value is approximately \$77,778 per acre or

Project Name	Findings and Conclusions
	\$141,336 for the 12 acres. When the assessed value is divided by the estimated available funds of \$1,500,000, the assessed value represents 10% of the total available funds.

Pierce Conservation District and Stream Team

Water Programs continued to fund basic operations for the Pierce Conservation District and Stream Team. The PCD continued to leverage this money into additional funding via grants. They have been cooperating on the Burley Lagoon and Filucy Bay shellfish closures by surveying animal-keeping properties, sending letters offering to do farm plans, and doing the plans as requested by landowners.

Stream Team continues to act as an important educational tool for the County. It now numbers over 400 volunteers doing plantings, staffing educational displays at community fairs, doing testing on streams, and other activities. A copy of the annual report is attached in Appendix 5.

Washington State University Watershed Stewards Program

This course, designed to educate citizens on water quality issues and solutions to problems, was offered again in 2001.

Financial Summary

A summary of all the financial items mentioned in this report are summarized in the table following:

2001 NPDES EXPENDITURES

DEPT/PROGRAM	SWMP COMMITMENT		ACTUAL EXPENDITURE	
	FTE	\$	FTE	\$
Water Programs				
Capital Improvement Program	7.3	671,000	13.25	8,679,368
Salmon Habitat Recovery Lead Entity	-	-	.65	62,246
Pond & Creek Maintenance	-	-	6	700,389
District Court Crew	-	-	7.8 FTE equival.	85,000
NPDES Coordination & Transfer to PALS	.5	48,000	2.5	700,834
Monitoring	1.1	79,850	1	77,590
Watershed Planning & Basin Plans	2.5	247,000	*2.5	934,939

DEPT/PROGRAM	SWMP COMMITMENT		ACTUAL EXPENDITURE	
	FTE	\$	FTE	\$
CWSP	1.25	125,000	1.25	181,925
Industrial Inspection	1.7	123,300	1.2	81,097
River Improvement Activities				
Buyouts	-	-	Varies	2,758,551
Drainage Investigations	1.6	119,850	1	**73,501
Endangered Species Act			1+	1,098,631
Tacoma Pierce County Health Department				
Recreational Shellfish	.1	7,800	.15	12,200
On-Site Sewage O&M	2	153,400	4.25	380,000
Wellhead Protection	-	-	.2	8,000
Bathing Beach Sampling	-	-	.1	8,000
Groundwater Monitoring	-	-	1.5	120,000
Compliance Group	2	153,400	3.0	179,000
Chambers-Clover Management Plan	-	-	.2	110,000
Source protection and Septic repair	-	-	1.9	150,000
PALS				
Implementation of Stormwater Management Manual	17	1,289,000	***17	1,490,000
Code Enforcement	4	465,700	.2	****8,600
Transportation Services				
Road Design	2	154,000	2	163,000
Road Maintenance	23.75	1,994,300	26.5	2,701,856
Pierce County Conservation District and Stream Team				
	-	-	varies	112,455
Parks and Recreation				
Conservation Futures	1	-	1	*****2,500,000
Training	-	5,305	-	23,586
Adequate Information				
Mapping	1	70,000	varies, but >1	339,360
Education				
	1	60,000	4	966,000

*FTE total does not include personnel for basin plans -- they are rolled into CIP and also most of work being done by consultants.

**Does not include PALS or Roads figures, which are wrapped into their budgets.

***FTE does not include people hired by contract from 4 engineering firms.

****Difference in amounts as a result of better accounting allowing designation of NPDES functions only.

*****All acquisitions not yet completed; \$1,879,782 spent in 2001.

APPENDIX 1

2001 report

<i>Inspection Date</i>	<i>Inspection Number</i>	<i>Parcel Number</i>	<i>Inspection Type</i>	<i>Maintenance Required</i>	<i>Owner</i>	<i>Site Address</i>	<i>Drainage Basin</i>	<i>BMP implementation</i>
<i>Inspector:</i> cgreco								
2/6/2001	295	031904405	Site	<input type="checkbox"/>	JAN W. & BABARA A. SC	10741-A "A" ST. SO.	2	
2/6/2001	285	381000028	Site	<input type="checkbox"/>	MARY LOU LAPENSKI	9910 PACIFIC AVE.	2	
2/6/2001	284	031904405	Site	<input type="checkbox"/>	JAN W. & BABARA A. SC	10741-A "A" ST. SO.	2	
2/7/2001	286	02-07-01	Site	<input checked="" type="checkbox"/>	RICHARD B. & SUZETTE	10203 SHERIDAN AVE. SO.	2	
2/7/2001	290	690500476	Site	<input type="checkbox"/>	ERIN & BRANDY MANZA	515 112TH ST. S.	2	
2/8/2001	292	031904203	Site	<input type="checkbox"/>	RONALD & GEORGINA	10121 PACIFIC AVE	2	
2/12/2001	287	381000034	Site	<input type="checkbox"/>	TAINI RICHARD W. SR. &	10200 PACIFIC AVE	2	
2/12/2001	310	031904204	Site	<input checked="" type="checkbox"/>	RONALD & GEORGINA E	10111 PACIFIC AVE	2	0
2/12/2001	308	031904201	Site	<input type="checkbox"/>	RONALD & GEORGINA	10105 PACIFIC AVE	2	0
2/13/2001	289	031904210	Site	<input type="checkbox"/>	GAZAY, JACK & MARTHA	10211 PACIFIC AVE.	2	
2/14/2001	296	500093001	Site	<input type="checkbox"/>	SCHMALENBERG JAN W	10733 "A" ST	2	
2/14/2001	293	474500023	Site	<input type="checkbox"/>	DECK CHARLES R. ETAL	10406 PACIFIC AVE.	2	
2/14/2001	294	474500023	Site	<input type="checkbox"/>	DECK CHARLES R. ETAL	10406 PACIFIC AVE.	2	
2/15/2001	297	500093003	Site	<input type="checkbox"/>	SCHMALENBERG JAN W	10737-C "A" ST. SO.	2	
2/20/2001	298	474500023	Site	<input type="checkbox"/>	DECK CHARLES R. ET	10410 PACIFIC AVE SO.	2	
2/20/2001	299	474500029	Site	<input type="checkbox"/>	DECK CHARLES R. ETA	10411 CROFT ST.	2	0
2/21/2001	301	626000173	Site	<input type="checkbox"/>	NELSON DALE W SR &	709 SO. 106TH ST	2	0
2/21/2001	339	774500126	Site	<input checked="" type="checkbox"/>	LEE DAVID G	9614 20TH AVE E	2	0
2/22/2001	302	381000023	Site	<input type="checkbox"/>	LOVELL STEWART R. &	10029 PACIFIC AVE SO	2	0
2/23/2001	306	031905312	Site	<input type="checkbox"/>	LESLIE & DIANA FROE	1525 S. 108TH ST.	2	0
2/23/2001	304	626000133	Site	<input type="checkbox"/>	JOHN BARKER	760 S. 107TH ST.	2	0
2/23/2001	303	224000452	Site	<input type="checkbox"/>	RAYMOND REX J & AUD	130 114TH ST SO	2	0
2/26/2001	305	601540001	Site	<input type="checkbox"/>	UNION PACIFIC RR CO	MINNING & MINERAL RIGH	1	0
2/27/2001	307	022026100	Site	<input type="checkbox"/>	GRECO WILLIAM E	5153 66TH ST W	2	0

<i>Inspection Date</i>	<i>Inspection Number</i>	<i>Parcel Number</i>	<i>Inspection Type</i>	<i>Maintenance Required</i>	<i>Owner</i>	<i>Site Address</i>	<i>Drainage Basin</i>	<i>BMP implementation</i>
3/22/2001	379	900301013	Site	<input type="checkbox"/>	RPIP LLC	9918 162ND ST CT E # 13	3	3
3/22/2001	367	900301002	Site	<input type="checkbox"/>	RPIP LLC	9918 162ND ST CT E # 2	3	3
3/28/2001	393	042131412	Site	<input type="checkbox"/>	THE 8025 LLC	8025 PACIFIC HWY E	4	4
3/28/2001	394	042131405	Site	<input type="checkbox"/>	CALVIN VICTOR J ETAL	8109 PACIFIC HWY E	4	2
3/29/2001	403	031925702	Site	<input checked="" type="checkbox"/>	AUSTIN WALTER & SHA	4111 176TH ST E	6	2
3/30/2001	398	042131412	Site	<input type="checkbox"/>	THOMPSON MICHAEL / S	8411 PACIFIC HWY E	4	3
4/2/2001	400	042131400	Site	<input checked="" type="checkbox"/>	AMERICAN REINFORCE	8209 PACIFIC HWY E	4	2
4/2/2001	399	500137001	Site	<input type="checkbox"/>	JOHN BEAULIEU	11003 S. A ST.	6	3
4/12/2001	411	432000218	Site	<input type="checkbox"/>	RESIDENTIAL PROPERT	12320 98TH AVE E 9709 12	3	0
4/12/2001	412	407521128	Site	<input type="checkbox"/>	MONETTE GARY W	11603 CANYON RD E	3	4
4/12/2001	415	407531039	Site	<input type="checkbox"/>	RED BELL PARTNERS L	11206 62ND AVE E	3	4
4/13/2001	421	031804110	Site	<input type="checkbox"/>	A-1 STORAGE	317 FIELD RD DALLAS	6	3
4/16/2001	422	407521200	Site	<input type="checkbox"/>	SUMMIT STORAGE LLC	5517 119TH ST. CT. E.	3	4
4/23/2001	423	012236106	Site	<input type="checkbox"/>	BJ'S SWEDE HILL MINI S	5808 SEHMEL DR NW	5	3
4/24/2001	433	012225405	Site	<input type="checkbox"/>	SMITH WALTER H	11302 BURNHAM DR NW	5	4
4/24/2001	432	012225407	Site	<input type="checkbox"/>	SMITH WALTER H & NO	11302 BURNHAM DR NW	5	4
4/24/2001	426	022129309	Site	<input type="checkbox"/>	HARBOUR VENTURES L	2005 34TH AVE NW	5	3
4/24/2001	425	022106209	Site	<input type="checkbox"/>	HIGHWAY 16 MINI STOR	8809 STATE ROUTE 16	5	4
4/30/2001	449	042006407	Site	<input type="checkbox"/>	HOWARD DONNA L	6713 PACIFIC HWY E	4	3
4/30/2001	450	022129302	Site	<input type="checkbox"/>	SHOENS MARK B	2105 34TH AVE NW	5	3
4/30/2001	451	022129702	Site	<input type="checkbox"/>	SHOENS MARK B	1914 POINT FOSDICK DR N	5	3
5/3/2001	485	022132100	Site	<input checked="" type="checkbox"/>	SIZEMORE SNYDER VAL	915 26TH AVE NW	5	2
5/3/2001	455	012225402	Site	<input type="checkbox"/>	MORRIS DAVID R & MER	BURNHAM DR NW & HWY	5	4
5/3/2001	454	022231303	Site	<input type="checkbox"/>	RAINBOW BURHAM LLC	9922 BURNHAM DR NW	5	0
5/3/2001	456	012236100	Site	<input type="checkbox"/>	GARRISON PAUL H & BE	SEHMEL DR NW	5	0
5/16/2001	493	031803304	Site	<input type="checkbox"/>	HART MICHAEL L & GRA	20617 MOUTAIN HIGHWA	6	3
5/17/2001	495	051901203	Site	<input checked="" type="checkbox"/>	CLARK LESLIE D & PATR	9910 233RD AVE E	23	2
5/18/2001	501	031803302	Site	<input type="checkbox"/>	WOODMAN JOHN H & C	20715 8TH AVE E	6	3
5/18/2001	502	031803301	Site	<input type="checkbox"/>	ONEIL LARRY & MARGIE	20710 MT HIGHWAY	6	3

<i>Inspection Date</i>	<i>Inspection Number</i>	<i>Parcel Number</i>	<i>Inspection Type</i>	<i>Maintenance Required</i>	<i>Owner</i>	<i>Site Address</i>	<i>Drainage Basin</i>	<i>BMP implementation</i>
6/5/2001	577	781000064	Site	<input type="checkbox"/>	SHAFFER PROPERTIES	818 99TH ST E	6	3
6/5/2001	573	775000046	Site	<input type="checkbox"/>	SCHWAN'S SALE ENTER	11017 PORTLAND AVE E	6	3
6/11/2001	587	061909103	Site	<input type="checkbox"/>	PIERCE COUNTY PARKS	N/A ABANDON B N RR R/W	7	0
6/11/2001	579	061917105	Site	<input type="checkbox"/>	PIERCE COUNTY PARKS	N/A ABANDON B N RR R/	7	0
6/11/2001	580	061920305	Site	<input type="checkbox"/>	PIERCE COUNTY PARKS	N/A ABANDON B N RR R/W	7	0
6/11/2001	582	061928208	Site	<input type="checkbox"/>	PIERCE COUNTY PARKS	N/A ABANDON B N RR R/W	7	0
6/11/2001	583	061920305	Site	<input type="checkbox"/>	PIERCE COUNTY PARKS	N/A ABANDON B N RR R/	7	0
6/11/2001	586	061919102	Site	<input type="checkbox"/>	PIERCE COUNTY PARKS	N/A ABANDON B N RR R/W	7	0
6/11/2001	588	061917105	Site	<input type="checkbox"/>	PIERCE COUNTY PARKS	N/A ABANDON B N RR R/W	7	0
6/11/2001	589	061917204	Site	<input type="checkbox"/>	PIERCE COUNTY PARKS	N/A ABANDON B N RR R/W	7	0
6/11/2001	584	061919405	Site	<input type="checkbox"/>	PIERCE COUNTY PARKS	N/A ABANDON B N RR R/W	7	0
6/15/2001	608	061920203	Site	<input type="checkbox"/>	LOONEY WILLIAM A	N/A ABANDON B N RR R/W	7	0
6/15/2001	612	051927407	Site	<input type="checkbox"/>	MICHAL JOHN C	N/A ABANDONED R/W	7	0
6/15/2001	606	061909103	Site	<input type="checkbox"/>	INGRAM RICHARD	N/A ABANDON B N RR R/W	7	0
6/15/2001	613	061917102	Site	<input type="checkbox"/>	PLUM CREEK TIMBER C	N/A ABANDONED R/W	7	0
6/15/2001	611	061921302	Site	<input type="checkbox"/>	BLOOMBERG OPAL L	N/A ABANDON B N RR R/W	7	0
6/15/2001	610	061921302	Site	<input type="checkbox"/>	BLOOMBERG OPAL L	N/A ABANDON B N RR R/W	7	0
6/15/2001	609	061928405	Site	<input type="checkbox"/>	TOWN OF WILKESON	N/A ABANDON B N RR R/W	7	0
6/15/2001	607	061909102	Site	<input type="checkbox"/>	BURLINGTON NORTHER	N/A ABANDON B N RR R/W	7	0
6/15/2001	604	061917204	Site	<input type="checkbox"/>	DOTY HARRY L & FORE	N/A ABANDON B N RR R/W	7	0
6/15/2001	603	061917105	Site	<input type="checkbox"/>	WALDEN MARY & JAME	N/A ABANDON B N RR R/W	7	0
6/15/2001	602	061918102	Site	<input type="checkbox"/>	BURLINGTON NORTHER	N/A ABANDONED B N RR	7	0
6/15/2001	601	061917203	Site	<input type="checkbox"/>	EDGINGTON KENNETH	N/A VACANT LAND	7	0
6/15/2001	605	061917105	Site	<input type="checkbox"/>	BURLINGTON NORTHER	N/A ABANDON B N RR R/W	7	0
6/15/2001	615	061917102	Site	<input type="checkbox"/>	PLUM CREEK TIMBER C	N/A ABANDONED R/W	7	0
6/18/2001	616	061908405	Site	<input type="checkbox"/>	BURLINGTON NORTHER	N/A UNUSED R/W	7	0
6/18/2001	624	051923403	Site	<input type="checkbox"/>	LANGLOIS GEORGE E &	ABANDONED BNR	7	0
6/18/2001	623	051926203	Site	<input type="checkbox"/>	HARRIS MARY	N/A ABANDONED R/W	7	0
6/18/2001	622	051926203	Site	<input type="checkbox"/>	LOONEY WILLIAM A	N/A ABANDONED R/W	7	0

<i>Inspection Date</i>	<i>Inspection Number</i>	<i>Parcel Number</i>	<i>Inspection Type</i>	<i>Maintenance Required</i>	<i>Owner</i>	<i>Site Address</i>	<i>Drainage Basin</i>	<i>BMP implementation</i>
9/5/2001	704	022132100	Site	<input checked="" type="checkbox"/>	CITY OF TACOMA	1202 26TH AVE NW	5	2
9/17/2001	807	051919302	Site	<input type="checkbox"/>	STAATZ BULB FARMS	SOUTH OF HOUSE # 15103	23	0
9/17/2001	805	041924104	Site	<input type="checkbox"/>	PIERCE COUNTY PARKS	WEST OF HOUSE # 14815 -	23	0
9/17/2001	804	041913406	Site	<input type="checkbox"/>	NYBO MAXINE L	SOUTH WEST OF HOUSE #	23	0
9/17/2001	803	041924103	Site	<input type="checkbox"/>	HIGH CEDAR GOLF CLU	SOUTH OF HOUSE # 14706	23	0
9/17/2001	784	041913406	Site	<input type="checkbox"/>	PIERCE COUNTY	NORTH WEST HOUSE # 14	23	0
9/17/2001	782	041913406	Site	<input type="checkbox"/>	PIERCE COUNTY PARKS	NORTH WEST OF HOUSE #	23	0
9/17/2001	781	041913405	Site	<input type="checkbox"/>	PIERCE COUNTY WATE	WEST OF HOUSE # 13923	23	0
9/17/2001	780	041913404	Site	<input type="checkbox"/>	PIERCE COUNTY PARKS	SOUTH OF HOUSE # 13723	23	0
10/22/2001	772	602180069	Site	<input type="checkbox"/>	CORP OF CATHOLIC AR	10425 187TH ST. E.	6	0
10/23/2001	769	500154008	Site	<input type="checkbox"/>	BETHEL STATION LLC	22221 MOUNTAIN HIGHWA	6	3
10/25/2001	795	022231302	Site	<input type="checkbox"/>	ROOT DAN & DENICE	10320 BURNHAM DRIVE N	5	2
11/6/2001	811	041931304	Site	<input type="checkbox"/>	ECON PACIFIC LLC	5415 189TH ST E	6	3

Total Inspections for this inspector 182

<i>Inspection Date</i>	<i>Inspection Number</i>	<i>Parcel Number</i>	<i>Inspection Type</i>	<i>Maintenance Required</i>	<i>Owner</i>	<i>Site Address</i>	<i>Drainage Basin</i>	<i>BMP implementation</i>
2/14/2001	293	474500023	Site	<input type="checkbox"/>	DECK CHARLES R. ETAL	10406 PACIFIC AVE.	2	
2/14/2001	294	474500023	Site	<input type="checkbox"/>	DECK CHARLES R. ETAL	10406 PACIFIC AVE.	2	
2/15/2001	297	500093003	Site	<input type="checkbox"/>	SCHMALENBERG JAN W	10737-C "A" ST. SO.	2	
2/20/2001	298	474500023	Site	<input type="checkbox"/>	DECK CHARLES R. ET	10410 PACIFIC AVE SO.	2	
2/20/2001	299	474500029	Site	<input type="checkbox"/>	DECK CHARLES R. ETA	10411 CROFT ST.	2	0
2/21/2001	301	626000173	Site	<input type="checkbox"/>	NELSON DALE W SR &	709 SO. 106TH ST	2	0
2/21/2001	339	774500126	Site	<input checked="" type="checkbox"/>	LEE DAVID G	9614 20TH AVE E	2	0
2/22/2001	302	381000023	Site	<input type="checkbox"/>	LOVELL STEWART R. &	10029 PACIFIC AVE SO	2	0
2/23/2001	303	224000452	Site	<input type="checkbox"/>	RAYMOND REX J & AUD	130 114TH ST SO	2	0
2/23/2001	304	626000133	Site	<input type="checkbox"/>	JOHN BARKER	760 S. 107TH ST.	2	0
2/23/2001	306	031905312	Site	<input type="checkbox"/>	LESLIE & DIANA FROE	1525 S. 108TH ST.	2	0
2/26/2001	305	601540001	Site	<input type="checkbox"/>	UNION PACIFIC RR CO	MINNING & MINERAL RIGH	1	0
2/27/2001	307	022026100	Site	<input type="checkbox"/>	GRECO WILLIAM E	5153 66TH ST W	2	0
2/27/2001	309	545500043	Site	<input type="checkbox"/>	MEDLEY DONALD K. JR.	5112 W. 66TH ST.	2	0
3/5/2001	314	041906304	Site	<input type="checkbox"/>	SHURGARD MINI STORA	10915 CANYON ROAD EAS	3	0
3/5/2001	315	032036109	Site	<input type="checkbox"/>	HAROLD LEMAY ENTER	8516 CANYON RD	3	0
3/5/2001	316	032036109	Site	<input type="checkbox"/>	HAROLD LEMAY ENTER	8516 CANYON RD	3	0
3/6/2001	322	041910701	Site	<input type="checkbox"/>	ARSLAND INC.	10315 128TH ST. E.	3	0
3/6/2001	318	041918104	Site	<input type="checkbox"/>	DOUGLAS FAULDS & DO	6920 128TH ST. E.	3	
3/6/2001	319	041918103	Site	<input type="checkbox"/>		6902 128TH ST. E.	3	0
3/6/2001	321	250000070	Site	<input type="checkbox"/>	HARVEY & CATHERINE		3	0
3/7/2001	320	041906308	Site	<input type="checkbox"/>	RUSHTON PATRICIA M	5815 112TH ST E	3	
3/8/2001	323	041921801	Site	<input type="checkbox"/>	BETSCHART AUGUST A	15916 99TH AVE CT E	3	
3/8/2001	327	041921801	Site	<input type="checkbox"/>	BETSCHART AUGUST A	15911 99TH ST CT E	3	
3/8/2001	326	041921801	Site	<input type="checkbox"/>	BETSCHART AUGUST A	15921 99TH ST CT E	3	
3/8/2001	325	041921801	Site	<input type="checkbox"/>	BETSCHART AUGUST A	15930 99TH ST CT E	3	
3/12/2001	330	041906403	Site	<input type="checkbox"/>	Mark W. Frazer	6319 E. 112th St.	3	0
3/12/2001	328	032036500	Site	<input type="checkbox"/>	Harry & Ellen Kusterer	5309 84th St. E., Tacoma, W	3	
3/12/2001	331	041907503	Site	<input type="checkbox"/>	Paul M. Warmoth	6424 112th St. E	3	

<i>Inspection Date</i>	<i>Inspection Number</i>	<i>Parcel Number</i>	<i>Inspection Type</i>	<i>Maintenance Required</i>	<i>Owner</i>	<i>Site Address</i>	<i>Drainage Basin</i>	<i>BMP implementation</i>
3/29/2001	397	774500163	Site	<input type="checkbox"/>	BLACK MARLIN VENTUR	1803 99TH ST. E.	3	3
3/29/2001	395	774500104	Site	<input type="checkbox"/>	CLARENCE ENGEL	9622 PORTLAND AVE	3	3
4/2/2001	400	042131400	Site	<input checked="" type="checkbox"/>	AMERICAN REINFORCE	8209 PACIFIC HWY E	4	2
4/2/2001	399	500137001	Site	<input type="checkbox"/>	JOHN BEAULIEU	11003 S. A ST.	6	3
4/4/2001	401	041927500	Site	<input type="checkbox"/>	BUCODDA PARTNERS L	11220 164TH ST. E.	3	3
4/5/2001	407	407531056	Site	<input checked="" type="checkbox"/>	MATTHEW D. KLEIN ETA	11409 58TH AVE E.	3	3
4/5/2001	402	407531056	Site	<input type="checkbox"/>	DANIEL & DENISE GRE	11403 58TH AVE E.	3	4
4/5/2001	408	581000010	Site	<input checked="" type="checkbox"/>	RONALD & KAPYO TOM	2924 112TH ST. E.	3	3
4/5/2001	406	407521038	Site	<input type="checkbox"/>	N/A	5604 112TH ST E.	3	0
4/5/2001	405	407521010	Site	<input type="checkbox"/>	CABINETMAKERS, INC.	11420 58TH AVE E.	3	4
4/5/2001	414	10000400	Site	<input type="checkbox"/>	HELMUT & INGE RIEDER	10305 139TH ST. CT. E. #	3	5
4/5/2001	417	10000400	Site	<input type="checkbox"/>	HELMUT & INGE RIEDER	10305 139TH ST. CT. E. #	3	5
4/5/2001	418	10000400	Site	<input type="checkbox"/>	HELMUT & INGE RIEDER	10305 139TH ST. CT. E. #	3	5
4/5/2001	419	10000400	Site	<input type="checkbox"/>	HELMUT & INGE RIEDER	10305 139TH ST. CT. E. #	3	0
4/5/2001	416	10000400	Site	<input type="checkbox"/>	HELMUT & INGE RIEDER	10305 139TH ST. CT. E. #	3	5
4/5/2001	409	041915703	Site	<input type="checkbox"/>	HELMUT & INGE RIEDER	10227 139TH ST. CT. E.	3	5
4/9/2001	410	031904408	Site	<input type="checkbox"/>	THOMAS & NANCY THO	118 E. 108TH ST.	2	
4/12/2001	412	407521128	Site	<input type="checkbox"/>	MONETTE GARY W	11603 CANYON RD E	3	4
4/12/2001	415	407531039	Site	<input type="checkbox"/>	RED BELL PARTNERS L	11206 62ND AVE E	3	4
4/12/2001	411	432000218	Site	<input type="checkbox"/>	RESIDENTIAL PROPERT	12320 98TH AVE E 9709 12	3	0
4/13/2001	420	407521200	Site	<input checked="" type="checkbox"/>	SUMMIT STORAGE LLC	5517 119TH ST. CT. E.	3	2
4/13/2001	421	031804110	Site	<input type="checkbox"/>	A-1 STORAGE	317 FIELD RD DALLAS	6	3
4/16/2001	422	407521200	Site	<input type="checkbox"/>	SUMMIT STORAGE LLC	5517 119TH ST. CT. E.	3	4
4/24/2001	427	031804409	Site	<input type="checkbox"/>	JOHN & CAROL WOODM	20620 8TH AVE E	6	3
4/24/2001	428	031804408	Site	<input type="checkbox"/>	N/A	123A 208TH ST. SE	6	0
4/24/2001	431	031810801	Site	<input type="checkbox"/>	BETHEL LLC	21905 MOUNTAIN HWY E.	6	4
4/24/2001	429	031804409	Site	<input type="checkbox"/>	SHIRLEY LAVELLE	20612 3RD AVE E	6	3
4/24/2001	430	031810401	Site	<input type="checkbox"/>	YU IN SIK & MYONG JA	21620 MTN HWY E	6	0
4/25/2001	437	031814404	Site	<input type="checkbox"/>	LUDWIG HEIMRATH & K	3206 232ND ST. E.	6	2

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5/9/2001	473	041930300	Site	<input type="checkbox"/>		5825 176TH ST E	6	4
5/9/2001	472	031913800	Site	<input type="checkbox"/>		13804 50TH AVE E.	6	4
5/9/2001	475	031925802	Site	<input type="checkbox"/>	SHOTWELL HOLDINGS L	17500 CANYON RD.	6	4
5/9/2001	474	041930302	Site	<input type="checkbox"/>	LOOKER PROPERTIES	55TH & 176TH	6	4
5/9/2001	469	041918212	Site	<input type="checkbox"/>		13015 CANYON RD E	6	4
5/9/2001	479	031913803	Site	<input type="checkbox"/>		5303 144TH ST. E.	6	4
5/11/2001	484	031936402	Site	<input type="checkbox"/>		19002 50TH AVE E	6	4
5/11/2001	481	031936303	Site	<input type="checkbox"/>	OSTERMANN & SCHEIW	4109 192ND ST E	6	4
5/14/2001	497	031936302	Site	<input type="checkbox"/>	SPANAWAY LUMBER CO	19111 38TH AVE E	6	4
5/14/2001	487	041808101	Site	<input type="checkbox"/>	RAINIER VENEER INC	8820 EUSTIS HUNT RD	6	4
5/14/2001	483	031936800	Site	<input type="checkbox"/>		5207 187TH ST. E.	6	4
5/14/2001	482	031936403	Site	<input type="checkbox"/>	KEY DEVELOPMENT INV	4615 192ND ST. E.	6	4
5/15/2001	490	041931300	Site	<input type="checkbox"/>	RAND-LAND INVESTMEN	5715 192ND ST E	6	4
5/15/2001	486	041930605	Site	<input type="checkbox"/>	JEFFREY & DEBRA BAC	16014 56TH AVE CT. E.	6	4
5/15/2001	488	041931205	Site	<input type="checkbox"/>		5521 184TH ST. E.	6	4
5/16/2001	498	031921301	Site	<input type="checkbox"/>		15315 PACIFIC AVE	6	4
5/16/2001	489	500166002	Site	<input type="checkbox"/>	JAMES HARDIE BUILDIN	18200 50TH AVE E	6	4
5/16/2001	492	041806202	Site	<input type="checkbox"/>		19209 CANYON RD E	6	4
5/17/2001	507	500121003	Site	<input type="checkbox"/>		10749 A ST. S.	6	0
5/17/2001	496	269500183	Site	<input type="checkbox"/>		13502 PACIFIC AVE	6	4
5/18/2001	503	602080004	Site	<input type="checkbox"/>	S S ARROW PARTNER	12815 CANYON RD. E.	6	4
5/18/2001	504	269500273	Site	<input type="checkbox"/>		120 132ND ST. S.	6	4
5/18/2001	499	713000016	Site	<input type="checkbox"/>		120 138TH ST S	6	0
5/18/2001	505	269500277	Site	<input type="checkbox"/>		120 132ND ST. S.	6	4
5/21/2001	520	041932101	Site	<input type="checkbox"/>	LANCE & JACKIE HECK	17923 78TH AVE E.	6	4
5/21/2001	517	041932500	Site	<input checked="" type="checkbox"/>	JAY & LORRAINE VALLO	17711 85TH AVE E.	6	2
5/21/2001	512	041931304	Site	<input type="checkbox"/>	Encon Pacific LLC	5415 189th St. E.	6	4
5/21/2001	511	500137001	Site	<input type="checkbox"/>	VISUAL HEALTH INFOR	11003 A ST S	6	4
5/21/2001	510	401500011	Site	<input type="checkbox"/>	MOUNTAIN MIST WATER	6615 204TH ST CT E	6	4

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6/12/2001	598	042001201	Site	<input type="checkbox"/>	ROBERT & MARY FAIRW	1400 140TH AVE NE	15	3
6/14/2001	639	041816207	Site	<input type="checkbox"/>	CITY OF TACOMA PUBLI	CHEHALIS WESTERN RR	12	4
6/19/2001	628	032027402	Site	<input type="checkbox"/>	ELLINGSON BROTHERS	7717 PORTLAND AVE	18	2
6/20/2001	634	052029303	Site	<input type="checkbox"/>		17136 HIGHWAY 410 EAST	15	4
6/20/2001	631	052021600	Site	<input type="checkbox"/>	CALVIN G. STONACK	5222 WEST TAPPS HWY	15	4
6/20/2001	633	061905700	Site	<input type="checkbox"/>	JOHN R. STAVE	26306 HWY 410 EAST	15	0
6/21/2001	635	051804200	Site	<input type="checkbox"/>	M& M PALMER ENT LLC	19220 S R 162 EAST	16	2
6/22/2001	638	041836300	Site	<input type="checkbox"/>	TACOMA EASTERN RAIL		12	0
6/22/2001	637	449540041	Site	<input type="checkbox"/>	MANKE LUMBER CO, IN	13702 8TH ST. E.	15	4
6/26/2001	648	538000009	Site	<input type="checkbox"/>	SHELLEY N. SMITH	54125 MTN HWY E.	19	4
6/28/2001	644	111731100	Site	<input type="checkbox"/>	DANA MEEKS & ASSOCI	MINING CLAIM	21	0
6/28/2001	643	041511100	Site	<input type="checkbox"/>	CITY OF TACOMA PUBLI	OFF ALDER MASHIEL CON	19	0
6/28/2001	641	051518301	Site	<input type="checkbox"/>	CITY OF TACOMA PUBLI	54108 MTN HWY	19	4
6/28/2001	642	041633201	Site	<input type="checkbox"/>	RICHARD DOW	46517 NATIONAL PARK HW	19	0
6/29/2001	647	061525100	Site	<input type="checkbox"/>	GUEST SERVICES INC.	55016 KERNAHAN RD. E.	19	4
7/3/2001	646	052020300	Site	<input type="checkbox"/>	HARRY B. CORLISS	16805 64TH ST. E.	15	4
7/5/2001	652	002234303	Site	<input type="checkbox"/>		9916 BAYVIEW RD. KPN	10	4
7/5/2001	661	458500069	Site	<input type="checkbox"/>	DAVID & KAREN CARLS	1302 KEY PENINSULA HWY	10	4
7/5/2001	653	002234303	Site	<input type="checkbox"/>		18922 BAYVIEW DR. KPN	10	4
7/5/2001	651	002024204	Site	<input type="checkbox"/>	STEAMBOAT LANDING I	GIG HARBOR-LONGBRANC	10	4
7/6/2001	650	002001202	Site	<input type="checkbox"/>		15 LORENZ RD KPS	10	4
7/6/2001	657	041809302	Site	<input type="checkbox"/>	FORS FARMS INC.	8617 224TH ST. E.	12	0
7/9/2001	654	032027402	Site	<input type="checkbox"/>	ELLINGSON BROTHERS	7717 PORTLAND AVE	18	4
7/9/2001	658	789500021	Site	<input type="checkbox"/>	T & S PROPERTIES	14053 PIONEER WAY E.	3	4
7/10/2001	659	061906201	Site	<input type="checkbox"/>	STUART & DARLENE DE	HWY 410 & 254TH	23	0
7/11/2001	662	051934505	Site	<input type="checkbox"/>	MARTIN UNRUH	17913 PIONEER WAY E.	24	4
7/11/2001	665	490500012	Site	<input type="checkbox"/>	MICHAEL & DEBRA BAC	8712 214TH AVE E.	23	0
7/12/2001	664	587500022	Site	<input type="checkbox"/>	KEVIN & KAREN TIMBER	615 FOX DRIVE	26	4
8/23/2001	679	300028007	Site	<input type="checkbox"/>	NORTHWESTERN GENE	14304 92ND AVE NW	25	4

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12/4/2001	838	041626100	Site	<input type="checkbox"/>	CITY OF TACOMA PUBLI	RAILROAD RIGHT-OF-WAY	20	0
12/7/2001	840	051927409	Site	<input type="checkbox"/>	PIERCE COUNTY	ABANDONED RAILROAD RI	24	0
12/10/2001	845	051707400	Site	<input type="checkbox"/>	RAINER TIMBER COMPA	31713 CAMP ONE RD	22	0
12/10/2001	844	041613202	Site	<input type="checkbox"/>	CITY OF TACOMA PUBLI	CHEHALIS WESTERN RAIL	20	0
12/11/2001	852	051705100	Site	<input type="checkbox"/>	PIERCE COUNTY	KAPOWSIN ELECTRON CO	22	0
12/11/2001	851	041502100	Site	<input type="checkbox"/>	CITY OF TACOMA PUBLI	EAST OF 48411 ALDER CU	20	0
12/11/2001	849	051520300	Site	<input type="checkbox"/>	STATE OF WASHINGTO	NATIONAL PARKWAY HWY	19	0
12/11/2001	854	041613400	Site	<input type="checkbox"/>	CITY OF TACOMA PUBLI	CHEHALIS WESTERN RR R	20	0
12/11/2001	846	041624203	Site	<input type="checkbox"/>	CHEHALIS WESTERN RA	OFF EATONVILLE CUT OFF	20	0
12/11/2001	843	041713400	Site	<input type="checkbox"/>	CITY OF TACOMA PUBLI	CLAY CITY ROAD	22	0
12/11/2001	855	041613400	Site	<input type="checkbox"/>	CHEHALIS WESTERN RA	CHEHALIS WESTERN RAIL	20	0
12/11/2001	853	041613303	Site	<input type="checkbox"/>	CITY OF TACOMA PUBLI	CHEHALIS WESTERN RR R	20	0
12/27/2001	866	041513100	Site	<input type="checkbox"/>	CITY OF TACOMA PUBLI	ACROSS FROM 52010 MTN	19	0
12/27/2001	867	041913406	Site	<input type="checkbox"/>	SOUTH FORK ESTATES	ABANDONED R/W	23	0

Total Inspections for this inspector 274

Inspector: jcollin

3/29/2001	403	031925702	Site	<input checked="" type="checkbox"/>	AUSTIN WALTER & SHA	4111 176TH ST E	6	2
5/3/2001	485	022132100	Site	<input checked="" type="checkbox"/>	SIZEMORE SNYDER VAL	915 26TH AVE NW	5	2
9/5/2001	704	022132100	Site	<input checked="" type="checkbox"/>	CITY OF TACOMA	1202 26TH AVE NW	5	2
10/23/2001	769	500154008	Site	<input type="checkbox"/>	BETHEL STATION LLC	22221 MOUNTAIN HIGHWA	6	3
10/25/2001	795	022231302	Site	<input type="checkbox"/>	ROOT DAN & DENICE	10320 BURNHAM DRIVE N	5	2
11/6/2001	811	041931304	Site	<input type="checkbox"/>	ECON PACIFIC LLC	5415 189TH ST E	6	3

Total Inspections for this inspector 6

<i>Inspection Date</i>	<i>Inspection Number</i>	<i>Parcel Number</i>	<i>Inspection Type</i>	<i>Maintenance Required</i>	<i>Owner</i>	<i>Site Address</i>	<i>Drainage Basin</i>	<i>BMP implementation</i>
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<i>Total Inspections for this inspector</i>				28				
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APPENDIX 2

Legend

Gauge Types

SN - Snowtell gauge
Precip - Precipitation Gauge
FL - Flow gage station
PZ - Piezometer
GW - Groundwater monitoring well
ST - Staff Gauge
WQ - Water quality monitoring site
T, FM - Temperature and Flow Monitoring

Maintained By

PC - Pierce County
USGS - United States Geological Survey
NRCS - Natural Resources Conservation Service
NWIFC - Northwest Indian Fisheries Commission
PUY - Puyallup Tribe of Indians
PSE - Puget Sound Energy
Corps - US Army Corp of Engineers

Sites monitored by Pierce County 2001

SITE_NUM	SITE_NAME	MAINT_BY	HYDRO_TYPE	GAUGE_TYPE	WTRSHED
LONG TERM					
100	MOWICH	NRCS	SNOWAT	SN	22
101	HUCKLEBERRY	NRCS	SNOWAT	SN	22
102	BURNT MOUNTAIN	NRCS	SNOWAT	SN	7
12082500	NISQUALLY NR NATIONAL	USGS	RIVER	FL	19
12086500	NISQUALLY AT LAGRAN	USGS	RIVER	FL	20
12089500	NISQUALLY AT McKENNA	USGS	RIVER	FL	8
12092000	PUYALLUP NR ELECTRON	USGS	RIVER	FL	22
12093500	PUYALLUP NR ORTING	CORPS	RIVER	FL	23
12094000	CARBON NR FAIRFAX	USGS	RIVER	FL	24
12095000	SO. PRAIRIE CRK. AT SO. PRAIRI	USGS	STREAM	FL	7
12096500	PUYALLUP AT ALDERTON	USGS	RIVER	FL	23
12097500	GREENWATER AT GREENWATER	USGS	RIVER	FL	21
12098000	MUD MTN LAKE NR BUCKLEY	CORPS	LAKE	ST	21
12098500	WHITE RIVER NR BUCKLEY	USGS	RIVER	FL	13
12099000	WHITE RIVER CANAL	PSE	RIVER	FL	15
12100000	WHITE RIVER AT BUCKLEY	USGS	RIVER	FL	13
12100496	WHITE RIVER NR AUBURN	USGS	RIVER	FL	15
12101000	LAKE TAPPS NR SUMNER	USGS	LAKE	ST	15
12101100	LAKE TAPPS DIVERSION	PSE	CANAL	FL	15
12101500	PUYALLUP AT PUYALLUP	USGS	RIVER	FL	23
MS031	136TH GOLDEN GIVEN	USGS	STREAM	FM	6
MS060	CLARKS CREEK	USGS	STREAM	FM	3
MS061	SWAN CREEK	USGS	STREAM	FM	3
MS001	SOUTH PRAIRIE	PC	PRECIP	PRECIP	23
MS005	PUY RD SHOP	PC	PRECIP	PRECIP	3
MS017	ELK PLAIN	PC	PRECIP	PRECIP	6
MS018	PURDY RD SHOP	PC	PRECIP	PRECIP	5
	HOME FIRE STATION	PC	PRECIP	PRECIP	10

SHELLFISH DISTRICTS

Rocky Bay					
MS039	RB1	PC	DITCH	WQ	10
MS040	RB2	PC	DITCH	WQ	10
MS041	RB3	PC	DITCH	WQ	10
MS042	RB4	PC	DITCH	WQ	10
MS043	RB5	PC	STREAM	WQ	10
MS044	RB6	PC	STREAM	WQ	10
MS045	RB7	PC	STREAM	WQ	10
MS046	RB8	PC	DITCH	WQ	10

Filiucy Bay

Site FB1	PC	STREAM	WQ
Site FB2	PC	STREAM	WQ
Site FB3	PC	STREAM	WQ
Site FB4	PC	DITCH	WQ
Site FB 5	PC	DITCH	WQ
Site FB 6	PC	DITCH	WQ
Site FB 7	PC	DITCH	WQ
Site FB 8	PC	DITCH	WQ
Site FB 9	PC	DITCH	WQ
Site FB 10	PC	DITCH	WQ
Site FB 11	PC	DITCH	WQ
Site FB 12	PC	DITCH	WQ
Site FB 13	PC	DITCH	WQ

Burley Lagoon

Site C3	PC	DITCH	WQ
Site C7	PC	DITCH	WQ
Site C8	PC	DITCH	WQ
Site C9	PC	DITCH	WQ
Site C10	PC	DITCH	WQ
Site C11	PC	DITCH	WQ
Site C12	PC	DITCH	WQ
Site C15	PC	DITCH	WQ
Site C16	PC	DITCH	WQ
Site C6	PC	DITCH	WQ
Site C13	PC	DITCH	

BASIN PLANNING

Muck Creek				
Muck Creek S fork	PC	STREAM	T, FM	12
Muck Creek N fork	PC	STREAM	T, FM	12
Tag # AFC086	PC	GROUNDWATER	MW	12
Tag # AFC087	PC	GROUNDWATER	MW	12
Site 3	PC	GROUNDWATER	MW	12
Tag # ABD831	PC	GROUNDWATER	MW	12
Tag # AFC091	PC	GROUNDWATER	MW	12
Tag# AFC088	PC	GROUNDWATER	MW	12
Tag# AFC085	PC	GROUNDWATER	MW	12
Tag# AFC097	PC	GROUNDWATER	MW	12
Tag# AFC096	PC	GROUNDWATER	MW	12
Tag# AFC095	PC	GROUNDWATER	MW	12
Tag# AFC094	PC	GROUNDWATER	MW	12
Tag# AFC093	PC	GROUNDWATER	MW	12
Tag# AFC098	PC	GROUNDWATER	MW	12
Tag# AFC092	PC	GROUNDWATER	MW	12
Tag# AFC090	PC	GROUNDWATER	MW	12
ECY-13	PC	GROUNDWATER	PZ	12
ECY-1	PC	GROUNDWATER	PZ	12
STAFF GAGE LACAMAS CR	PC	STREAM	ST	12
ECY-2	PC	GROUNDWATER	PZ	12
HEC-12	PC	GROUNDWATER	PZ	12
ECY-3	PC	GROUNDWATER	PZ	12
ECY-4	PC	GROUNDWATER	PZ	12
HEC-9	PC	GROUNDWATER	PZ	12
HEC-7	PC	GROUNDWATER	PZ	12
ECY-6	PC	GROUNDWATER	PZ	12
ECY-5	PC	GROUNDWATER	PZ	12
HEC-6	PC	GROUNDWATER	PZ	12
HEC-2	PC	GROUNDWATER	PZ	12
HEC-1	PC	GROUNDWATER	PZ	12
ECY-7	PC	GROUNDWATER	PZ	12
ECY-10	PC	GROUNDWATER	PZ	12
ECY-8	PC	GROUNDWATER	PZ	12
ECY-11	PC	GROUNDWATER	PZ	12
ECY-12	PC	GROUNDWATER	PZ	12
ECY-9	PC	GROUNDWATER	PZ	12
Gig Harbor				
Artondale Creek	PC	STREAM	T, FM	5
McCormick Creek	PC	STREAM	T, FM	5
Crescent Creek	PC	STREAM	T, FM	5
Artondale Creek	PC	LAKE	WQ	
Lake Sylvia (Site 1)	PC	LAKE	WQ	
Lake Sylvia (Site 2)	PC	LAKE	WQ	
Lake Sylvia (Site 3)	PC	LAKE	WQ	
Ray Nash & 67th	PC	STREAM	WQ	
Rosedale Creek	PC	STREAM	WQ	
Nelyaly Creek	PC	STREAM	WQ	
Wollochet Creek	PC	STREAM	WQ	
Sullivan Creek	PC	STREAM	WQ	
Donkey Creek	PC	STREAM	WQ	
Crescent Creek	PC	STREAM	WQ	
Goodenough Creek	PC	STREAM	WQ	
McCormick Creek	PC	STREAM	WQ	

Clover Creek Basin				
Clover Creek @ 25th Street	PC	STREAM	T, FM	
Clover Creek @ C Street	PC	STREAM	T, FM	
Clover Creek @ Spanaway Loop	PC	STREAM	T, FM	
Spanaway Creek @ Military Rd	PC	STREAM	T, FM	
NF Trib @ Brookdale	PC	STREAM	T, FM	

MISC WELLS

Chamber Creek Properties					
	Chambers	PC			
	Abitibi	PC			
Ates/Hemlock Pond CIP					
MS008	HEMLOCK PND A	PC	Pond	ST	
MS008	HEMLOCK PND A	PC	Pond	ST	
MS009	ATES 2	PC	Grnwat	MW	
MS010	ATES 5	PC	Grnwat	MW	
MS011	ATES 3	PC	Grnwat	MW	
MS012	ATES 1	PC	Pond	MW	
MS013	ATES 7	PC	Pond	ST	
MS014	ATES 4	PC	Pond	MW	
Fredrickson CIP					
MS047	RMW1	PC	GROUNDWATER	MW	6
MS048	RMW3	PC	GROUNDWATER	MW	6
MS049	POT	PC	GROUNDWATER	MW	6
MS050	SG1	PC	POND	ST	6
MS051	PZ1	PC	GROUNDWATER	MW	6
MS052	PZ4	PC	GROUNDWATER	MW	6
MS053	FR1	PC	GROUNDWATER	MW	6
MS054	FR2	PC	GROUNDWATER	MW	12
MS055	FR31	PC	GROUNDWATER	MW	6
MS056	FR32	PC	GROUNDWATER	MW	6
MS059	FR4	PC	GROUNDWATER	MW	6
	W1	PC	GROUNDWATER	MW	6
	W1-MW1	PC	GROUNDWATER	MW	6
	W1-MW2	PC	GROUNDWATER	MW	6
	W1-MW3	PC	GROUNDWATER	MW	6
	W1-MW4	PC	GROUNDWATER	MW	6
	W1-MW5	PC	GROUNDWATER	MW	6
	W1-MW6	PC	GROUNDWATER	MW	6
	W1-MW7	PC	GROUNDWATER	MW	6
	W1 ST	PC	POND	ST	6

YEAR	B-IBI Sites LOCATION	SAMPLED BY WATERSHED #	
2001	Boise Creek	PC	23
2001	Canyon Creek	PC	23
2001	Gale Creek	PC	23
2001	Green Water River	PC	23
2001	Horn Creek	PC	8
2001	Jovita Creek	PC	23
2001	Lynch Creek	PC	23
2001	Ohop Creek downstream	PC	8
2001	Purdy Creek	PC	10
2001	School House Creek	PC	10
2001	South Prairie Creek	PC	7
2001	Spiketon Creek	PC	23
2001	Swan Creek	PUY TRIBE	3
2001	25 Mile Creek (nwifc)	NWIFC	8
2001	Ohop Creek upstream (nwifc)	NWIFC	8
2001	Lacamas Creek (nwifc)	NWIFC	12
2001	Mashel River (nwifc)	NWIFC	8
2001	Little Mashell River	PC	8
2001	Tanawax (nwifc)	NWIFC	8
2001	Rocky Creek	PC	10
2001	Lacamus Creek @56th	PC	12
2001	Lacamus Creek @DNS 507	PC	12
2001	NF Muck	PC	12
2001	NF Muck @Ranch	PC	12
2001	Clarks Creek	PC	3
2001	Swan Creek	PC	3
2001	Canyon Creek	PC	3
2001	Diru Creek	PC	3
2001	Sequally Creek	PC	3

APPENDIX 3

DATE	OUTFALL ID NO.	LOCATION	S-T-R	PIPE SIZE	Material	FLOW	FIELD ANALYSIS	DISCHARGE LOCATION	LAND USE	FIELD DESCRIPTION	COMMENTS
7/16/2001	141903-01	25th Ave E. (South side of bridge)	14--19--03	21"	CCP	NO	NO	Clover Creek	Residential	Outfall	Elk Plain shop jurisdiction / Outfall not visible due to excessive vegetation / not accessible due to fence
8/8/2001	041903-04	10600 Broadway Ave S.	04--19--03	32"	CMP	YES	NO	Parkland Ditch	Residential	culvert	Chambers creek shop jurisdiction / Parkland ditch
7/16/2001	161903-01	132nd St on Pacific Avenue	16--19--03	36"	CMP	NO	NO	Clover Creek	Commercial	Outfall	Elk Plain shop jurisdiction / Excessive vegetation
8/8/2001	161903-03	C Street bridge, between 132nd St S & 130th St Ct S	16--19--03	18"	CCP	NO	NO	Clover Creek	Residential	Outfall	Puyallup shop jurisdiction / Excessive vegetation
8/8/2001	161903-02	C Street bridge, between 132nd St S & 130th St Ct S	16--19--03	18"	CCP	NO	NO	Clover Creek	Residential	Outfall	Puyallup shop jurisdiction / Excessive vegetation
8/20/2001	352101-01	Northshore Blvd off of 6th Ave, Fox Island	35--21--01	12"	CCP	NO	NO	Hale Passage	Residential	Outfall	Purdy road shop jurisdiction
8/20/2001	352101-02	Northshore Blvd off of 6th Ave, Fox Island	35--21--01	12"	CCP	NO	NO	Hale Passage	Residential	Outfall	Purdy road shop jurisdiction
8/20/2001	352101-03	Northshore Blvd off of 6th Ave, Fox Island	35--21--01	12"	CCP	YES	NO	Hale Passage	Residential	Outfall	Purdy road shop jurisdiction
8/20/2001	352101-04	Northshore Blvd off of 6th Ave, Fox Island	35--21--01	12"	CCP	YES	NO	Hale Passage	Residential	Outfall	Purdy road shop jurisdiction
8/20/2001	352101-05	Northshore Blvd off of 6th Ave, Fox Island	35--21--01	12"	ADS	YES	NO	Hale Passage	Residential	Outfall	Purdy road shop jurisdiction
8/20/2001	362101-17	Intersection of Chinook and 7th Lane	36--21--01	12"	CCP	NO	NO	Hale Passage	Residential	Outfall	Purdy road shop jurisdiction / natural springs all along hillside, per resident of the area
8/29/2001	362101-18	Intersection of 7th Avenue and Chinook	36--21--01	12"	CCP	NO	NO	Hale Passage	Residential	Outfall	Purdy shop jurisdiction / discharges into saltwater pond on # 733 Chinook property (Mrs. Bingham)
8/20/2001	362101-19	Off of Fox Drive, west of house #851	36--21--01	14"	ADS	NO	NO	Hale Passage	Residential	Outfall	Purdy road shop jurisdiction
8/20/2001	012001-01	Intersection of 9th Ave and Fox Drive	01--20--01	12"	CMP	NO	NO	Hale Passage	Residential	Outfall	Purdy road shop jurisdiction
8/28/2001	182002-01	13th Ct off Pilchuck Drive	18--20--02	12"	CCP	NO	NO	Puget Sound	Residential	Storm drain	Purdy road shop jurisdiction / northern cul-de-sac at end of 13th Ct.
8/28/2001	182002-02	End of Queets Dr. Fox Island	18--20--02	18"	ADS	NO	NO	Puget Sound	Residential	Outfall	Purdy road shop jurisdiction
8/7/2001	062002-01	Beach side of #1166 Hyak Place	06--20--02	12"	ADS	NO	NO	Hale Passage	Residential	Outfall	Purdy road shop jurisdiction / outfall partially buried on beach
8/2/2001	062002-02	On beach, SE of 062002-01	06--20--02	12"	CMP	NO	NO	Hale Passage	Residential	Outfall	Purdy road shop jurisdiction
8/2/2001	062002-03	On beach, SE of 062002-02	06--20--02	12"	CMP	NO	NO	Hale Passage	Residential	Outfall	Purdy road shop jurisdiction
8/16/2001	362101-01	Cromwell Dr NW-Multiple outfalls	36--21--01	12"	conc bulkhead	YES	NO	Hales Passage	Residential	Outfall	Purdy road shop jurisdiction
8/16/2001	362101-02	Cromwell Dr NW-Multiple outfalls	36--21--01	12"	conc bulkhead	YES	NO	Hales Passage	Residential	Outfall	Purdy road shop jurisdiction
8/16/2001	362101-03	Cromwell Dr NW-Multiple outfalls	36--21--01	12"	conc bulkhead	YES	NO	Hales Passage	Residential	Outfall	Purdy road shop jurisdiction / trickle flow
8/16/2001	362101-04	Cromwell Dr NW-Multiple outfalls	36--21--01	12"	conc bulkhead	YES	NO	Hales Passage	Residential	Outfall	Purdy road shop jurisdiction
8/16/2001	362101-05	Cromwell Dr NW-Multiple outfalls	36--21--01	12"	conc bulkhead	YES	NO	Hales Passage	Residential	Outfall	Purdy road shop jurisdiction / trickle flow
8/16/2001	362101-06	Cromwell Dr NW-Multiple outfalls	36--21--01	12"	conc bulkhead	NO	NO	Hales Passage	Residential	Outfall	Purdy road shop jurisdiction
8/16/2001	362101-07	Cromwell Dr NW-Multiple outfalls	36--21--01	12"	conc bulkhead	YES	NO	Hales Passage	Residential	Outfall	Purdy road shop jurisdiction / trickle flow
8/16/2001	362101-08	Cromwell Dr NW-Multiple outfalls	36--21--01	12"	conc bulkhead	YES	NO	Hales Passage	Residential	Outfall	Purdy road shop jurisdiction
8/16/2001	362101-09	Cromwell Dr NW-Multiple outfalls	36--21--01	12"	conc bulkhead	NO	NO	Hales Passage	Residential	Outfall	Purdy road shop jurisdiction
8/16/2001	362101-10	Cromwell Dr NW-Multiple outfalls	36--21--01	12"	conc bulkhead	YES	NO	Hales Passage	Residential	Outfall	Purdy road shop jurisdiction
8/16/2001	362101-11	Cromwell Dr NW-Multiple outfalls	36--21--01	12"	conc bulkhead	YES	NO	Hales Passage	Residential	Outfall	Purdy road shop jurisdiction
8/16/2001	362101-12	Cromwell Dr NW-Multiple outfalls	36--21--01	24"	conc bulkhead	NO	NO	Hales Passage	Residential	Outfall	Purdy road shop jurisdiction
8/16/2001	362101-13	Cromwell Dr NW-Multiple outfalls	36--21--01	12"	conc bulkhead	YES	NO	Hales Passage	Residential	Outfall	Purdy road shop jurisdiction
8/16/2001	362101-14	Cromwell Dr NW-Multiple outfalls	36--21--01	18"	conc bulkhead	YES	NO	Hales Passage	Residential	Outfall	Purdy road shop jurisdiction
8/16/2001	362101-15	Cromwell Dr NW-Multiple outfalls	36--21--01	12"	conc bulkhead	NO	NO	Hales Passage	Residential	Outfall	Purdy road shop jurisdiction
8/16/2001	362101-16	Cromwell Dr NW-Multiple outfalls	36--21--01	12"	conc bulkhead	NO	NO	Hales Passage	Residential	Outfall	Purdy road shop jurisdiction
8/28/2001	262101-01	Fairwind Ln and Warren Dr NW	26--21--01	24"	CMP	YES	NO	Hales Passage	Residential	Outfall	Purdy road shop jurisdiction
8/28/2001	142101-01	In front of 7625 Artondale Drive NW	14--21--01	18"	CCP	YES	NO	Artondale Creek	Residential	Outfall	Purdy road shop jurisdiction
8/28/2001	052002-01	South end of Point Fosdick Road (on the beach)	05--20--02	18"	ADS	YES	NO	Puget Sound	Residential	Outfall	Puyallup shop jurisdiction
8/9/2001	012004-01	Across from 314 Butte Ave SE @ Butte Pit	01--20--04	(2) 42"	CCP	YES	YES*	White River	Industrial/Resid	Outfall	Puyallup shop jurisdiction / Excessive vegetation
8/10/2001	291904-01	160th St. E., between 83rd and 84th Ave.	29--19--04	24"	CMP	NO	NO	Clover Creek	Residential	Outfall	Puyallup shop jurisdiction
8/6/2001	242001-01	Peninsula Hwy at Filucy Bay	24--20--01	18"	ADS	NO	NO	Filucy Bay	Residential	Outfall	Purdy shop jurisdiction
8/6/2001	242001-02	Peninsula Hwy at Filucy Bay	24--20--01	18"	CMP	NO	NO	Filucy Bay	Marina	Outfall	Purdy shop jurisdiction
8/28/2001	022101-01	9200 block of S. Vaughn Rd, KPN	02--21--01	18"	CCP	NO	NO	Vaughn Bay	Residential	Outfall	Purdy road shop jurisdiction
8/7/2001	262101-01	End of Olympic Vista Ct NW	26--22--01	12"	CMP	NO	NO	Henderson Bay	Residential	Outfall	Purdy road shop jurisdiction
8/13/2001	332001-01	Larson Rd, just south of mailbox #10919	33--20--01	24"	CCP	YES	NO	Puget Sound	Residential	Outfall	Chambers creek road shop jurisdiction / tidal influenced - can not locate or see during high tide
8/13/2001	332001-02	Adjacent to south side of ferry dock, Villa Beach Rd	33--20--01	12"	CCP	NO	NO	Puget Sound	Residential	Outfall	Chambers creek shop jurisdiction
8/13/2001	332001-03	100 ft north of mailbox #8820 on Villa Beach Rd	33--20--01	12"	CMP	NO	NO	Puget Sound	Residential	Outfall	Chambers creek road shop / bottom portion of outlet is corroded - inlet side of pipe has excessive veg
8/13/2001	332001-04	Just north of mailbox #8902 on Villa Beach Rd	33--20--01	18"	CMP	NO	NO	Puget Sound	Residential	Outfall	Chambers creek road shop jurisdiction / outfall buried in sand on beach and requires maintenance
8/13/2001	332001-05	South side of driveway at #8906 Villa Beach Rd	33--20--01	12"	CMP	NO	NO	Puget Sound	Residential	Outfall	Chambers creek road shop / standing water in ditch - outfall completely buried, needs maintenance
8/13/2001	332001-06	At mailbox #8922 on Villa Beach Rd	33--20--01	12"	CCP	NO	NO	Puget Sound	Residential	Outfall	Chambers creek road shop jurisdiction / could not locate outlet end of outfall - buried with sand
8/13/2001	332001-07	Between 9026 and 9204 Villa Beach Rd	33--20--01	12"	CCP	NO	NO	Puget Sound	Residential	Outfall	Chambers creek shop jurisdiction / erosion down embankment, on outlet end of pipe
8/13/2001	322001-01	At end of Otso Point Rd	32--20--01	12"	ADS	NO	NO	Balch passage	Residential	Outfall	Chambers creek shop jurisdiction / outlet is completely covered with sand - could not locate
8/13/2001	051901-01	Intersection of Eckenstam-Johnson Rd with 108th St	05--19--01	36"	CCP	YES	NO	Puget Sound	Residential	Outfall	Chambers creek shop jurisdiction / tree stump at outlet end of outfall - possible blockage - excessive Vegetation
8/13/2001	081901-01	Approximately 60 ft from mail box #12000 at E-J road	08--19--01	60"	CCP	YES	NO	Oro Bay	Residential	Bridge Culvert	Chambers creek shop jurisdiction / tidal influenced by salt water
8/13/2001	081901-02	E-J Rd, about 125' north of mailbox #12024	08--19--01	12"	CCP	NO	NO	Oro Bay	Residential	Outfall	Chambers creek jurisdiction
8/13/2001	081901-03	E-J Rd, about 110' south of mailbox #12024	08--19--01	12"	CMP	NO	NO	Oro Bay	Residential	Outfall	Chambers creek shop jurisdiction / bottom of outfall has rusted out- requires maintenance
8/13/2001	081901-04	E-J Rd, about 150' south of driveway to mobile	08--19--01	12"	CMP	NO	NO	Oro Bay	Residential	Outfall	Chambers creek shop jurisdiction / Could not see outlet end of outfall due to excessive vegetation
8/13/2001	081901-05	E-J Rd, opposite buried cable marker #083352	08--19--01	18"	CCP	NO	NO	Oro Bay	Residential	Outfall	Chambers creek shop jurisdiction / Excessive vegetation
8/13/2001	081901-06	E-J Rd, 100' north of mailbox #12410	08--19--01	18"	CCP	NO	NO	Oro Bay	Residential	Outfall	Chambers creek shop jurisdiction
8/13/2001	081901-07	E-J Rd, about 100' south of mailbox #12410	08--19--01	12"	CCP	NO	NO	Oro Bay	Residential	Outfall	Chambers creek shop jurisdiction / Excessive vegetation
8/13/2001	081901-08	E-J Rd, about 90' south of mailbox #12618	08--19--01	12"	CCP	YES	NO	Oro Bay	Residential	Outfall	Chambers creek shop jurisdiction / trickle from outfall
8/13/2001	081901-09	E-J Rd, about 260' south of mailbox #12618	08--19--01	12"	CCP	YES	NO	Oro Bay	Residential	Outfall	Chambers creek shop jurisdiction / Excessive vegetation
8/13/2001	081901-10	E-J Rd, north side of intersection with Brandt Rd	08--19--01	12"	CMP	NO	NO	Oro Bay	Residential	Outfall	Chambers creek shop jurisdiction / outfall corrosion
8/13/2001	171901-01	E-J Rd, south side of intersection with Brandt Rd	17--19--01	12"	CMP	NO	NO	Oro Bay	Residential	Outfall	Chambers creek road shop jurisdiction
8/14/2001	171901-02	E-J Rd, directly across from house at mailbox #12804	17--19--01	12"	CMP	NO	NO	Oro Bay	Residential	Outfall	Chambers creek road shop jurisdiction
8/14/2001	171901-03	E-J Rd, about 110' south of mailbox #12804	17--19--01	12"	CCP	NO	NO	Oro Bay	Residential	Outfall	Chambers creek road shop jurisdiction
8/14/2001	171901-04	E-J Rd, about 500' south of last outfall	17--19--01	12"	CCP	NO	NO	Oro Bay	Residential	Outfall	Chambers creek road shop jurisdiction
8/14/2001	171901-05	E-J Rd, opposite house #13006	17--19--01	12"	CMP	NO	NO	Oro Bay	Residential	Outfall	Chambers creek road shop jurisdiction
8/14/2001	171901-06	E-J Rd, about 100' south of mailbox #13006 & 13110	17--19--01	12"	CMP	NO	NO	Oro Bay	Residential	Outfall	Chambers creek road shop jurisdiction / Excessive vegetation
8/14/2001	171901-07	E-J Rd, between mailbox #13110 & 13514	17--19--01	12"	CMP	NO	NO	Oro Bay	Residential	Outfall	Chambers creek road shop jurisdiction / Excessive vegetation
8/14/2001	171901-08	E-J Rd, north side of driveway to #13514 house	17--19--01	12"	CCP	NO	NO	Oro Bay	Residential	Outfall	Chambers creek road shop jurisdiction / Excessive vegetation
8/14/2001	091901-01	Marina Rd, bottom of hill, at bend in road	09--19--01	12"	CMP	YES	NO	Puget Sound	Residential	Outfall	Chambers creek road shop jurisdiction / outfall is behind wooden bulkhead / trickle flow
8/14/2001	091901-02	Marina Rd, about 10' south of last outfall	09--19--01	12"	CMP	NO	NO	Puget Sound	Residential	Outfall	Chambers creek road shop jurisdiction

APPENDIX 4

2001

**PIERCE COUNTY PARKS
Pesticides and Fertilizers**

3/21/2002 14:17

	Total Acreage	Treated Acres	Appl. Rate/Acre	# Appl. Per Year	Total Amt Per Year	Description of Treated Areas
PARKS DIVISION	1962.6	78.89				
<u>Fertilizer 18-3-18 30% SCU</u>						
(50# bag)					Pounds	
Ft. Steil. Park (house/picnic/fields)		23.5	66	3	4,650.0	Sports fields
Gonyea Playfield		14	71	1	1,000.0	Mowed grass areas
Lake Tapps Park		10.71	70	3	2,250.0	Mowed grass areas
Lidford Playfield		7.69	65	1	500.0	Mowed grass areas
Western State Ballfield		5.5	97	3	1,600.0	Ballfields
Spanaway #4 PL Bank		0.5	100	1	50.0	Formal lawn areas
Spanaway House		0.25	100	2	50.0	Formal lawn areas
Spanaway Park-Phy Fit		10	75	1	750.0	Mowed grass areas
Spanaway Park - Islands		2	75	2	300.0	Formal lawn areas
Spanaway Park-Entrance		1	100	2	200.0	Formal lawn areas
Lake Tapps (Scotts Weed & Feed 35#)		0.98	143	2	280.0	Residence & concession lawns
<u>Herbicides</u>						
<u>Round-Up Pro (1oz/128oz)</u>					Gallons	
Dawson Playfield		0.02	2.75	3	0.1	Fence lines
Dawson Playfield (50/50 mix Surflan w/Round-up 3oz each)		0.04	3	2	0.3	Fence lines, walkways
Frontier Park		0.56	1	9	5.0	Fence lines, walkways, & roads
Ft. Steilacoom Park		0.08	1	2	0.2	Athletic field lining, edge curbs, pathway
Ft. Steilacoom Park		0.13	1.5	16	3.0	Spot spray shop yard, barns, fence, knæ
Gonyea Playfield (50/50 mix Surflan w/Round-up 3oz each)		2.00	3	1	6.0	Athletic field lining, edge curbs, sidewalk
Lake Tapps Park		2.00	1	2	4.0	Curbs, parking lot, roadway shoulders, walkways
Lake Tapps Park		0.50	2	1	1.0	Spot spray noxious weeds
Lidford Playfield		0.05	1.5	1	0.1	Curbs, baseball field, fence line
Lidford Playfield (50/50 mix Surflan w/Round-up 3oz each)		0.02	3	1	0.05	Curbs, baseball field, fence line

Orange Gate Property	0.16	1.5	1	0.2	Spot spray for noxious weeds
Western State Ballfield	0.08	1.5	2	0.3	Athletic field lining, fence lines
<u>Moss Out</u>					
Lake Tapps (1 oz/gal)	0.98	0.03	1	0.03	Residence & concession lawns
	6.60				

GOLF DIVISION	215	70		Pounds	
<u>Fertilizers</u>					
18-3-18 Large Prill	60	100	2	12,000.0	Fairways & Irrigated Roughs
18-3-18 w/40%scu, Med Prill	60	100	1	6,000.0	Fairways & Irrigated Roughs
Ag Lime, Prill	60	100	1	6,000.0	Fairways & Irri. Roughs (every other year)
18-3-18 Medium Prill	4	250	5	5,000.0	Tees & surrounds
18-9-18 Small Prill	4	250	5	5,000.0	Greens & surrounds
Pro Scape 14-2-14	4	200	2	1,600.0	Greens (200 lbs/acre +/-)
				Gallons	
Opti-Gro Liquid 25-2-3+minors or Liq.	4	2	6	48.0	Greens & surrounds (2 gal/acre)
Aide 25-0-0+Duralizer or 0-0-20					
Opti-Gro Iron Aide (Fe)	4	1	3	12.0	Greens & surrounds (1 gal/acre +/-)
or Feature 12-0-0 + Fe					
Primer Wetting Agent	4	0.5	12	24.0	Greens & surrounds (.5 gal/acre +/-)
Spreader/Sticker Activator 90 or R11	4	0.25	12	12.0	Greens & surrounds (.25 gal/acre +/-)
<u>Herbicides (gal/acre)</u>	3			Gallons	
Confront	2	0.25	2	1.0	Fairways & Irri. Roughs (.25 gal/acre)
Round-Up Pro	1	1.5	1	1.5	Fairways & Irri. Roughs (1-2x years/1-2
Surflan	1	0.75	1	0.75	Flower beds
Trimec	2	0.5	2	2.0	Irrigated roughs
<u>Fungicides</u>	4				
Fore Flowable	4	1	6	24.0	Greens (1gal/acre)
Daconil 2787 or Cleary's 3336	4	1	2	8.0	Greens (2gal/acre)
Chipco 26019	4	1	2	8.0	Greens (1gal/acre +/-)
Systec	4	1	1	4.0	Greens (1gal/acre +/-)
Heritage	4	0.3	1	1.2	Greens (.3 lbs/acre +/-)

REC CENTERS DIVISION	108.5	22					
<u>Fertilizers</u>					Pounds		
18-3-18 30% SCU	19.1	100	4	7,650.0		Sports fields & formal lawns	
<u>Herbicides</u>					Gallons		
Confront	17.0	0.21	1	3.5		Spot spray for broadleaf weeds	
Round-Up Pro (2oz/gal) / SRC	1.9	2	2	7.5		Fence lines, ballfield lining	
Round-Up Pro (2oz/gal) / LCC	2.5	0.50	2	2.5		Spot spray for broadleaf weeds-beds, parking lot	
GROUND S DIVISION	80	37.4	Appl. Rate/Acre		Pounds		
<u>Fertilizers</u>							
18-3-18 30% SCU	6.5	129.95	20	16,835.0		Formal lawns	
Best 9-9-9	4.9	217.86	4	4,250.0		Perennial flower beds & roses	
Calpril (Soil Amendment)	6.4	1014.30	1	6,500.0		Formal lawns	
<u>Herbicides</u>							
Mec Amine-D Turf	13.97	0.02	3	0.8	gallons	Hard surfaces, formal lawns, spot spray	
Round-Up Pro	13.61	0.03	6	2.5	gallons	Curbs, pavements, beds, spot spraying	
Manage	0.02	43.56	1	1.0	gram	Bedding areas	
Diuron 80	0.33	1.5	1	0.50	lbs	Gravel parking areas	
Surflan A.S.	2.28	0.05	2	0.23	gallons	Hard surfaces, edges	
Ferrous Sulfate (Moss Out)	0.54	18.54	1	10.0	lbs	Formal lawns	
R11 Activator/Sticker	0.36	0.02	1	0.01	gallons	Bedding areas	
Sinbar	0.33	0.75	1	0.25	lbs	Gravel parking areas	
<u>Insecticides</u>							
Chlorpyrifos 2.3G (Dursban)	0.54	46.36	1	25.00	lbs	Formal lawns, spot treatment	
Metasystox (inject)	0.43	12.44	1	5.3	gallons	Trees, systemic insecticide	
Ortho Rose Pride	0.35	0.07	2	0.05	gallons	Roses, systemic insecticide	
<u>Fungicides</u>							
Cleary Chemical 3336-F	0.36	0.02	1	0.01	gallons	Flower beds	
Ortho Funginex	0.35	0.02	1	0.01	gal	Roses	

Total Acres / Treated Acres	2366	208
Parks	1963	79
Golf Courses	215	70
Recreation Centers	109	22
Grounds Division	80	37
Total Regularly Maintained	741	
Total Minimally Unmaintained	1625	

The Golf Course reduced acreage treated on greens, surrounds, and fairways.

The Golf Course reduced the number of applications in 2001 due to milder weather.

The Ft Steilacoom Golf Course property was reduced by 50 acres.

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**PIERCE COUNTY PARKS - 2001
TRAINING**

<u>Training Received</u>	<u># Hours</u>	<u>Course Cost</u>	<u>Salary</u>	<u>Total Cost</u>
Pesticide Classes				
Parks employees (10)	160	700.00	27.09	5,034.76
Golf Courses (5)	72	420.00	28.01	2,436.58
Grounds (4)	72	315.00	21.35	1,852.02
Cost of Study Materials		71.73		71.73
Integrated Plant Health Management (pesticide credits)				
Erin Benedict	24	150.00	25.71	767.04
Gerald Olson	24	150.00	24.33	733.92
Athletic Field/Sport Turf Workshop				
Bret Schuler	8	75.00	21.58	247.64
Eddie Sanchez	8	75.00	21.58	247.64
Northwest Turfgrass Assoc Conference				
Andrew Soden	24	814.78	35.05	1,655.98
Toby Lirot	24	388.60	25.71	1,005.64
Scott Tyson	24	388.60	25.71	1,005.64
PACE Turfgrass Research Seminar				
Andrew Soden	16	596.58	35.05	1,157.38
Washington Turf & Landscape (Pesticide credits)				
Andrew Soden	16	110.00	35.05	670.80

Derald Randall	16	55.00	25.71	466.36
Jeff Donovan	16	55.00	25.71	466.36
WWGCSA Crew Seminars				
Andrew Soden	24	90.00	35.05	931.20
Toby Lirot	16	90.00	25.71	501.36
Rick Lewis	16	90.00	11.00	266.00
Eric Olsen	8	40.00	8.00	104.00
Jeff Melvard	8	40.00	25.71	245.68
TOTALS	576			\$19,622.04

APPENDIX 5

Pierce Conservation District

Year 2001

Annual Report of Accomplishments

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Pierce Conservation District Long Range Plan 1997

Profile and Mission

The Pierce Conservation District is a legal sub-entity of State Government mandated by RCW 89.08 to develop and administer voluntary, non-regulatory programs. The District promotes “on the ground” conservation and long-term sustainability of natural resources through action oriented leadership, partnership, stewardship, and education with the citizens, organizations and governments which have a stake in Pierce County for future generations.

Goals for Watersheds

- Improve water quality
- Protect, restore and enhance fish and wildlife habitat
- Promote practices which sustain agriculture and non-industrial forestry and woodlands
- Become a primary avenue for credible environmental education
- Conserve urban natural resources

Goals for District Operations

- Establish long-term stable funding
- Increase district capacity through ongoing training and development of supervisors and staff
- Provide for a productive working environment
- Maintain an effective working relationship with our partners

Program Area: Conservation Planning/Implementation

Goal: Work with District Cooperators to implement BMP's to protect water quality and preserve, enhance, or restore critical fish and wildlife habitat.

Objective: Continue the Small Farm Assistance Program (SFAP).

Pierce County is home to numerous small acreage landowners with widely varying degrees of experience in land management. When well managed, these "small farms" provide essential elements to the cultural, economic, and social fabric of the community. However, fundamental resource management issues must be addressed to protect, enhance, and preserve the long term ecological functions of the local watersheds.

Poorly managed small livestock operations can create a multitude of natural resource concerns. These include high nutrient and coliform levels from animal waste, increased runoff and turbidity from land clearing and soil compaction, and increased water temperature and streamside erosion due to removal of woody vegetation in the riparian zone.

Several Pierce County watershed plans have identified small acreage farms as significant contributors of non-point source pollution to surface and groundwaters. These include: Lower Puyallup Watershed Plan (1995), Clover/Chambers Creek Watershed Action Plan (1997), and the Key Peninsula/Gig Harbor Watershed Action Plan (1998). Furthermore, these plans specifically direct the Pierce Conservation District to continue and strengthen its leadership role in implementing water quality and riparian best management practices on private lands.

Small acreage farms are a major water quality and resource concern in Pierce County. The role of the Pierce Conservation District is to provide comprehensive resource management assistance to private landowners in Pierce County. The District is the key player in addressing these concerns. The following is an example from the *Lower Puyallup Watershed Plan*:

Lower Puyallup Watershed Plan (1995)

"The Pierce Conservation District has developed an existing inventory of farms with implemented farm plans and is currently updating an inventory of other farms. Existing District programs include a corrective action element that includes voluntary measures for farm plan design, implementation, evaluation, and updating. The Pierce Conservation District is developing programs to increase the number of small farms with plans and the level of plan implementation amongst dairies."

Actions:

- Continue to establish landowner contacts in the Nisqually, Clover/Chamber, Puyallup, and Key Peninsula Watersheds and promote conservation planning and the implementation of best management practices.

Lead:

**Nisqually Watershed -
Puyallup/Key Peninsula**

R. Skaggs, M. Baden

Activity Date:

Throughout year

Accomplishment: Many contacts were made through landowner visits, newsletters, walk-ins, phone calls and workshops conducted

- Write 18 conservation plans in various watersheds throughout Pierce County.

Lead: R. Skaggs, M. Baden

Activity Date:	1st quarter - 1/1 - 3/31 -	2 plans
	2nd quarter - 4/1 - 6/30 -	4 plans
	3rd quarter - 7/1 - 9/30 -	0 plans
	4th quarter - 10/1 - 12/31 -	8 plans

Accomplishment: 14 farm plans were completed, 16 more were requested. 163 site visits were made during the year.

- Goal of implementing BMP's with 18 different landowners countywide. All designs and installed best management practices will meet or exceed NRCS standards.

Lead: R. Skaggs, M. Baden, K. Neal, NRCS Staff

Activity Date:	1st quarter - 1/1 - 3/31 -	3 practices
	2nd quarter - 4/1 - 6/30 -	5 practices
	3rd quarter - 7/1 - 9/30 -	6 practices
	4th quarter - 10/1 - 12/31 -	4 practices

Accomplishment: Best Management Practices implemented in 2001 included;

***350 feet of stream exclusion fencing
2,397 feet of pasture cross fencing and heavy use area fencing
14 confinement areas installed with heavy use protection
6 roof runoff systems
450 feet underground drainage outlet
5 waste storage structures
26.7 acres of prescribed grazing***

- Effectively use the District's Cost Share program to encourage implementation of best management practices.

Lead: District Board

Activity Date: Cost-share request reviewed every board meeting

Accomplishment: 18 cooperators utilized District and NRCS cost-share programs

- Conservation Commission Implementation Grants - Continue to use these grants (99-10-IM) to carry out the District's Small Farm Assistance Program (SFAP) countywide. Offer assistance to those who request conservation plans for the purposes of protecting water quality.

Lead: R. Skaggs, M. Baden

Activity Date: **Throughout Year**

Accomplishment: The 99-10-IM was completed and the SFAP is utilizing the new implementation grant and a small portion of the Puget Sound Implementation grant for technical assistance

- Use the Centennial Clean Water Fund grant to continue to support the District's SFAP. Offer assistance to those who request conservation plans for the purposes of protecting water quality in Pierce County.

Lead: **R. Skaggs, M. Baden, Staff**

Activity Date: **Throughout Year**

Accomplishment: The SFAP is utilizing the CCWF grant to provide countywide small farm planning.

Objective: Provide Assistance to Pierce County Dairy Farms.

Manure and waste products generated on a dairy contain bacteria and other contaminants that may be harmful to the health of humans, wildlife, domestic animals, fish and shellfish. Across the country, elevated nitrate levels in drinking water are being partially linked to agricultural practices. The preliminary findings of a recent study of the Abbotsford/Sumas aquifer, in Whatcom County, linked a significant percentage of total nitrate loading to agriculture. While this does not mean that every farm pollutes, it does mean that the potential to pollute exists (Manure Management Guidelines for Western Washington, WSU Cooperative Extension, 1995).

The District received a grant from the Conservation Commission to work with Pierce County dairy farms over the next two years (2000 – 2002). The technical assistance dollars will be used to enhance existing conservation plans and provide assistance in implementation. The District will provide one-on-one education for dairy operators in the management of structural and non-structural BMP's. The District will use existing staff with technical supervision provided by the NRCS.

Actions:

- Work with the Natural Resources Conservation Service (NRCS) to update farm plans for Pierce County dairies requesting assistance. An anticipated 4 plans will be updated.

Lead: **NRCS Staff, M. Baden**

Activity Date: **Throughout Year**

Accomplishment: Four plans written or updated.

- Provide cost-share assistance to Pierce County dairies for water quality improvement projects through the District Dairy Cost Share or the NRCS EQIP Program.

Lead: **NRCS Staff, M. Baden, PCD Board**

Activity Date: **Throughout Year**

Accomplishment: Projects installed using District cost share assistance included 2 waste storage structures, 4 waste transfer systems, 935 feet of fencing, and 698 acres of nutrient management.

- Implement the new Conservation Commission Dairy Waste grant 99-10-DW. This includes cost share funds.

Objective 1 - Develop a district program that will concentrate on the development, implementation, and evaluation of dairy waste management systems. Dairy waste management systems will be based on current knowledge of BMP's. Technical assistance will include follow-up maintenance of implemented BMP's and implementation of nutrient management.

Objective 2 - Provide \$39,940 in cost share funding to assist dairy farmers in implementing dairy waste management systems.

Accomplishment: Program developed, and cost share used to benefit Pierce County dairies.

- Provide PCD Board plan approval on completed dairy waste management plans and certification of plan implementation based on a system developed by the State Technical Advisory Committee.

Lead: **M. Baden**

Activity Date: **Throughout Year**

Accomplishment: 2 Dairy plans certified.

Program Area: District Operations

Goal: Establish a work environment that promotes productivity, efficiency, team work, and prompt customer service for Pierce County residents

Objective: Promote District Programs to Pierce County residents and make key decision-makers aware of the value of the District's Conservation Program. (See also Program Area: Information/Education).

Actions:

- Keep legislators and County Council members informed about District concerns and activities.

Lead: District Board, District Manager

Activity Date:

1. Attend County Council meeting to update members on PCD activities.
2. Send quarterly reports to Pierce County.
3. Meet one on one with council members at least once during the year.

Accomplishment: The Board and Manager met with the entire County Council, and with Council Members individually to discuss District concerns and activities.

- Explore long-term funding for Conservation District Programs. The Assessment Committee will continue to meet to develop the idea of long-term funding and present to the County Council.

Lead: District Board, District Manager

Activity Date: Throughout year

Accomplishment: The District presented a proposal for assessment funding to the Pierce County Council. It was not acted upon by the Council.

- Hold an annual meeting to promote District Programs, inform the public on key conservation issues, and honor District Cooperators who have made a significant contribution to protecting water quality or enhancing fish and wildlife habitat.

Lead: District Board, Staff

Activity Date: February 7, 2001

Accomplishment: The District's Annual Meeting was held on February 7, 2001.

- Continue to work with existing Watershed Councils and look for opportunities to coordinate District programs.

Lead: District Board, Staff

Activity Date: Throughout year

Accomplishment: *The District continued its involvement in the local Watershed Councils.*

Objective: Provide for timely financial accountability

Since 1996, the District has been developing an accounting system using QuickBooks Pro 6.0. Several other Districts around the state have also switched to Quickbooks Pro. This endeavor has been very successful. With the advent of new computer software, Districts no longer need to rely on out-of-date BARS Accounting methods. The State Auditor's Office has updated the BARS Manual. However, the Auditor's Office has given little guidance on developing a standard "Chart of Accounts" for use statewide by Conservation Districts in our day to day accounting activities.

Actions:

- Develop and submit Conservation District budgets for District Operations and Stream Team to the Pierce County Surface Water Management for fiscal year 2002.

Lead: District Manager

Activity Date: June 2001

Accomplishment: *Completed.*

- Prepare and submit yearly financial statements to the State Auditor's Office, the Conservation Commission and the PCD Board of Supervisors.

Lead: District Manager, S. Corwin

Activity Date: By April 1, 2001

Accomplishment: *Completed.*

- Conduct an Internal Audit.

Lead: District Board, District Manager, S. Corwin

Activity Date: Before April 1, 2001

Accomplishment: *Completed.*

- Update budgets by funding source using QuickBooks Pro 6.0.

Lead: District Manager, S. Corwin

Activity Date: March 15, 2001

Accomplishment: Completed.

Objective: Provide staff supervision, evaluation, and employee development.

Actions:

- Employ full-time technicians to carry out District responsibilities and grant tasks. The District Board may also consider contracting with a private entity, agency, or general contractor to implement grant tasks or projects.

Lead: District Board

Activity Date: Throughout year

Accomplishment: Completed.

- Administer annual employee performance evaluations and update work plans.

Lead: District Manager, NRCS Staff, and Personnel Committee

Activity Date: December 2001 (annually)

Accomplishment: Completed.

- Establish a formal internship program for one or two positions from 6 months to one year. Interns would sign a job description and receive a stipend.

Lead: District Manager, NRCS Staff, Personnel Committee

Activity Date: January 2001 (annually)

Accomplishment: Completed.

- Hold joint NRCS and District staff meetings once per month and Program Meetings with staff members once per month.

Lead: District and NRCS Staff

Activity Date: Throughout year

Accomplishment: Completed.

Objective: Provide support to continue to develop the District's computer capabilities.

Actions:

- Maintain the District's server and upgrade software and individual hard drives and memory (RAM) as needed.

Lead: S. Corwin, District Manager

Activity Date: **Throughout year**

Accomplishment: Completed.

- Maintain the District Mailing Database. Explore the use of the District's Cooperators Database to have statewide appeal and work with interested Districts to develop this goal. Continue to maintain and update when needed the Stream Team Volunteer Database, Stream Team Water Quality Database, Culvert Database, and Tree Sale Database. Enhance and create new reports to track progress and present data in a usable form.

Lead: **Computer contractor, District Manager**

Activity Date: **Throughout year**

Accomplishment: Completed.

- Maintain the District and Stream Team Web-sites on the Internet. Complete Dairy page.

Lead: **S. Corwin**

Activity Date: **Throughout year**

Accomplishment: Completed.

Objective: Provide administrative support to the PCD Board of Supervisors.

Actions:

- Develop a "Board Policy" notebook to document board decisions and policies relating to the District's Conservation Program.

Lead: **District Manager, S. Corwin**

Activity Date: **July 2001**

Accomplishment: This objective has been moved to our 2002 plan.

- Restructure the District's main filing system.

Lead: **District Manager, S. Corwin**

Activity Date: **June 2001**

Accomplishment: Completed.

- Maintain the Equipment Inventory database using the State Auditor's requirements.

Lead: **S. Corwin**

Activity Date: **Throughout year**

Accomplishment: Completed.

- Maintain a letter file to track out-going and in-coming District letters.

Lead: S. Corwin

Activity Date: Throughout year

Accomplishment: This objective has been moved to our 2002 plan

- Review the Annual Work Plan quarterly with NRCS District Conservationist.

Lead: District Manager, NRCS Staff, District Board

Activity Date: Quarterly throughout year

Accomplishment: Completed.

- Maintain the District office supply cabinet. The District will purchase the basic supplies (pens, pencils, glue, tape, colored paper, etc.) through Office Depot. The District can purchase the materials on-line and they are shipped directly to the District office.

Lead: S. Corwin, District Manager

Activity Date: Throughout year

Accomplishment: Completed.

- Maintain a "Media Book," which will include newspaper articles, press releases, and ads that highlight something the District has done or is doing.

Lead: S. Corwin, District Manager

Activity Date: Throughout year

Accomplishment: Completed.

- Maintain and update the personnel policy manual as necessary.

Lead: Personnel Committee, District Manager

Activity Date: Throughout year

Accomplishment: Completed.

- Maintain the cross-reference table for comparing names of District Accounts with BARS Coding for the state auditor. This element will be included in the District's Annual Financial Report to the State Auditor's Office.

Lead: S. Corwin, District Manager

Activity Date: **Throughout year**

Accomplishment: Completed.

Objective: Establish a G.I.S. component to the District's Conservation Program.

Actions:

- Continue to update Arcview software and the appropriate layers from Pierce County GIS Department and other sources such as NRCS, FSA, etc.

Lead: **M. Baden, District Manager**

Activity Date: **March 2001**

Accomplishment: Completed.

- Continue to provide training to PCD and NRCS staff on the use and application of GIS in conservation planning and implementation.

Lead: **M. Baden, District Manager**

Activity Date: **March 2001**

Accomplishment: Completed.

Program Area: Stream Team Program

Goal: Improve the quality of streams for the benefit of fish, wildlife, and people.

Objective: Provide an informational/educational program for urban and rural residents of Pierce County that focuses on educating residents about the importance of water quality and the protection of critical resources for future generations.

The Pierce Conservation District's Stream Team Program is sponsored by the Pierce County Water Quality Coalition - (Pierce Conservation District, Pierce County Surface Water Management, City of Tacoma, City of Lakewood, City of Puyallup, City of Sumner, and City of Fife). The purpose of the program is to: 1) Involve citizens in observing, monitoring, recording and reporting stream conditions; 2) To create a community information exchange that will increase awareness of how our activities affect water resources; 3) Improve water quality through direct citizen involvement; 4) Motivate the public to change their habits for the sake of fish and wildlife; and 5) Provide useful data to resource agencies.

Basic Stream Team Program Funding:

		<i>Percent of total Budget</i>
<i>Pierce County Surface Water Mgt.</i>	<i>\$31,158</i>	<i>34.5%</i>
<i>City of Tacoma</i>	<i>\$25,000</i>	<i>27.7%</i>
<i>City of Lakewood</i>	<i>\$18,000</i>	<i>19.9%</i>
<i>City of Puyallup</i>	<i>\$ 6,000</i>	<i>6.7%</i>
<i>City of Fife</i>	<i>\$ 5,000</i>	<i>5.5%</i>
<i>City of Sumner</i>	<i>\$ 5,000</i>	<i>5.5%</i>

- **Eight** workshops and tours will be offered that cover various activities, topics, and watersheds in the county. Topics may include wetlands, backyard conservation, salmon life cycle, non-point source pollution, native plant identification, etc.

Lead: J. Gordon, I. Ragland

Activity Date: Throughout Year

Accomplishment: Nine workshops and tours were conducted.

- Field Training Sessions will be conducted on water quality testing, macro-invertebrate sampling, and other educational presentations upon request or as needed throughout the county.

Lead: I. Ragland, J. Gordon

Activity Date: Throughout Year

Accomplishment: 12 field training sessions were conducted, with 70 participants.

- Publish **four** quarterly Stream Team Newsletters and distribute to Stream Team Mailing list.

Lead: J. Gordon

Activity Date: Throughout Year

Accomplishment: Completed.

- **Twelve** streambank revegetation projects using native plant material. Projects will use Stream Team volunteers. Plant materials will be supplied by the District, South Puget Sound Salmon Enhancement Group, US Fish and Wildlife, or other sources. Revegetation projects will meet NRCS standards.

Lead: J. Gordon

Activity Date: Throughout Year

Accomplishment: Six projects were conducted, with 495 volunteers installing 4,556 plants.

- Continue the Storm Drain Stenciling Program. Provide assistance to groups that are interested in stenciling. Assist entities with planning and preparation of city-wide stenciling days.

Lead: J. Gordon

Activity Date: June-September 2001

Accomplishment: 852 storm drains were stenciled by 130 volunteers.

- Publish September and October 2001 activities in Water Weeks.

Lead: J. Gordon

Activity Date: September – October 2001

Accomplishment: Completed.

- Update and continue to expand the Stream Team Homepage on the Internet. Encourage Stream Team Volunteers to utilize the web-site to exchange and submit information via the Internet.

Lead: S. Corwin, J. Gordon, I. Ragland

Activity Date: Throughout year

Accomplishment: Ongoing.

- Continue to seek partnerships with other agencies and/or organizations within Pierce County in order to not duplicate efforts to combine resources to better serve the public.

Lead: District Manager, J. Gordon, I. Ragland

Activity Date: Throughout Year

Accomplishment: Ongoing.

- Continue to customize computer software programs to track volunteers, water quality data, and other information associated with the Stream Team program and water quality tracking database.

Lead: District Manager, J. Gordon, I. Ragland

Activity Date: Throughout Year

Accomplishment: Ongoing.

- Coordinate the Stream Team booth at the Puyallup Fair.

Lead: J. Gordon, I. Ragland

Activity Date: August – September 2000

Accomplishment: Completed.

- Recognize volunteer efforts at Pierce Conservation District Annual Meeting.

Lead: J. Gordon, I. Ragland

Activity Date: February 2001

Accomplishment: Completed.

- Continue to improve water quality sampling protocol and re-evaluate monitoring sites. Hold quality control/quality assurance training for all monitors in February 2001.

Lead: I. Ragland, J. Gordon

Activity Date: Throughout Year

Accomplishment: Completed.

- Establish permanent water quality monitoring sites on streams emphasized by each entity. Work towards purchasing level 3 or 4 accuracy monitoring equipment for these sites. Work to find funding for sending water samples to labs for analysis.

Lead: J. Gordon, I. Ragland, District Manager

Activity Date: Throughout Year

Accomplishment: Completed.

- Expand recruitment of volunteers through media relations (radio spots, newspaper articles, public service announcements).

Lead: J. Gordon

Activity Date: **Throughout year**

Accomplishment: Completed.

- Participate with the University of Washington in their annual temperature survey.

Lead: **J. Gordon**

Activity Date: **August 2001**

Accomplishment: Completed.

- Convene a water quality data meeting for Puyallup and Clover-Chambers watershed monitors and lake monitors.

Lead: **J. Gordon, I. Ragland**

Activity Date: **November – December 2001**

Accomplishment: Completed.

- Participate with Pierce County in their macro-invertebrate sampling for the Puyallup watershed. Post data on Salmon Web UW web page.

Lead: **District Manager, J. Gordon, I. Ragland**

Activity Date: **September – October 2001**

Accomplishment: Completed.

- Participate in the Puyallup River Watershed Education Committee.

Lead: **J. Gordon**

Activity Date: **Throughout Year**

Accomplishment: Ongoing.

**Objective: Review overall Stream Team Program strengths and weaknesses.
Develop a funding strategy and a plan for staff support.**

Actions:

- Work on additional funding for the Stream Team program.

Lead: **District Board, District Manager**

Activity Date: **Throughout Year**

Accomplishment: Ongoing.

- Create an internship position to help with the Stream Team workload.

Lead: **District Manager, Personnel Committee**

Activity Date: **March 2001**

Accomplishment: Completed.

- Prepare an annual report for the Stream Team Program for the period January 1, 2001 to December 31, 2001. Send annual report along with budget request to the different entities.

Lead: **J. Gordon, District Manager**

Activity Date: **December 2001**

Accomplishment: Completed.

Program Area: Water Quality

Goal: Protect water quality through the implementation of Best Management Practices with landowners.

Objective: Continue to maintain and expand the Small Farm Assistance Program and Dairy Waste Management Program. Look at other agricultural activities such as row crops and assess their impact on water quality and design a program to address these impacts.

Actions:

- Look for support for developing a technical assistance program for row crop farmers in the Puyallup Valley.

Lead: PCD Board, District Manager, NRCS Staff, M. Baden

Activity Date: February 2001

Accomplishment: Ongoing.

- Seek funding to continue the District's Small Farm Assistance Program (SFAP).

Lead: PCD Board, District Manager, NRCS Staff

Activity Date: Throughout Year

Accomplishment: Ongoing.

- Continue to support the Stream Team's water quality monitoring program. Currently there are 39 sites being monitored four times during the year. Employ a ½ time FTE to assist in carrying out the program.

Lead: District Manager, I. Ragland

Activity Date: Throughout year

Accomplishment: Ongoing.

- Respond to landowner requests for water quality sampling on or adjacent to their property. Utilize dairy grant funds set aside for sampling on dairy farms.

Lead: M. Baden

Activity Date: Throughout year

Accomplishment: Ongoing.

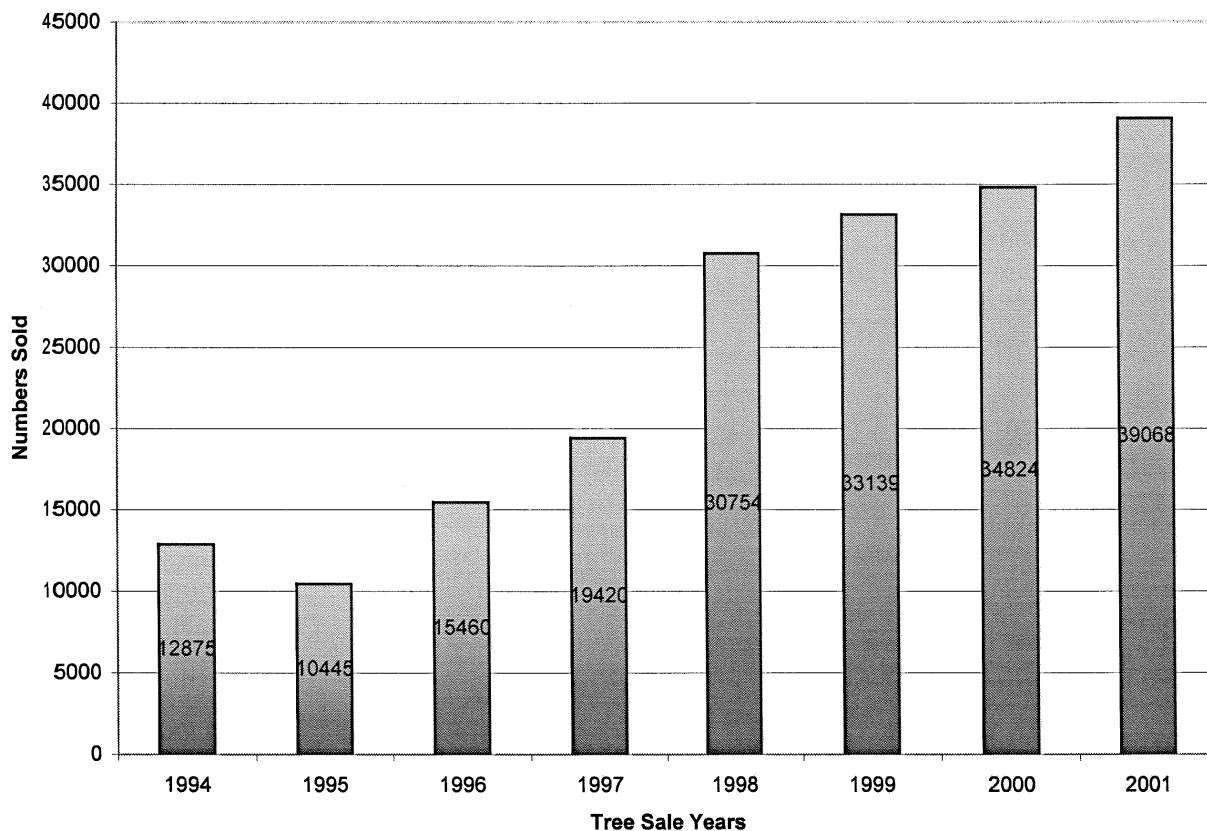
Program Area: Tree Sale

Goal: Promote the use of native vegetation for conservation practices and landscaping.

Objective: Provide native plant material to private landowners throughout Pierce County through the PCD annual tree sale.

The purpose of this sale is to promote the use of native plants on private and public lands. Native plants are a wonderful low maintenance addition to landscapes. Because these plants are naturally occurring in Western Washington, they do not require additional water or fertilizers to grow. They are also more resistant to pests than ornamental plants and provide food and shelter for northwest wildlife.

PCD Tree Sales



The tree sale is a great way to promote native vegetation and educate the public about the importance of native plants. The District has seen a phenomenal growth in tree sales over the last five years. The District will continue to promote native vegetation.

Actions:

- Utilize the Clover Park Technical College Fort Lewis Campus/Nursery for the plant/tree sale pick-up site.

Lead: R. Skaggs

Activity Date: March 2001

Accomplishment: Completed.

- Develop a partnership with Clover Park Technical College Horticulture Club to containerize and maintain plant materials for use in fall revegetation projects.

Lead: R. Skaggs

Activity Date: February 2001

Accomplishment: Ongoing.

- Promote the tree sale through the local newspapers and mailings.

Lead: Staff, R. Skaggs, I. Ragland

Activity Date: September, October, November, & December 2001

Accomplishment: Completed.

- Offer plant materials that are high quality stock to provide for maximum survival. Reserve materials from nurseries early in the year.

Lead: R. Skaggs, I. Ragland

Activity Date: March 2001

Accomplishment: Completed.

- Offer a native plant workshop for Pierce County residents.

Lead: Stream Team

Activity Date: November 2001

Accomplishment: Completed.

Program Area: Information/Education

Goal: Promote District programs and provide landowners with usable information to protect water quality, fish and wildlife habitat, and promote conservation planning in managing their natural resources.

Objective: Provide the residents of Pierce County with information and educational opportunities that promote conservation.

The key to an effective Conservation Program is a strong emphasis on providing information and education opportunities. Promoting good conservation and teaching people how to implement conservation practices correctly is one of the reasons landowners like working with conservation districts. Districts are non-regulatory and have no enforcement authority. The District's outreach and education program includes a quarterly newsletter, a comprehensive Internet web-site (www.piercecountycd.org), district brochure, newspaper articles, cable T.V. local programming, several workshops throughout the year (Stream Team, Small Farm), and press releases announcing activities.

Actions:

- Update District brochure explaining and promoting the Conservation District, our activities, and programs.

Lead: District Manager, Staff

Activity Date: February 2001

Accomplishment: Completed.

- Continue to develop informational slide presentations that can be given to various organizations promoting conservation and the District.

Lead: District Manager

Activity Date: Throughout year

Accomplishment: Completed.

- Publish and distribute the District quarterly newsletter *Conservation News*.

Lead: R. Skaggs, Staff

Activity Date: February, March, August, November

Accomplishment: Completed.

- Maintain a web site on the Internet promoting the Conservation District and Stream Team.

Lead: S. Corwin, J. Gordon, Staff

Activity Date: Throughout Year

Accomplishment: Completed.

- Provide 4 free workshops for livestock owners on small acreages at different sites around the county.

Lead: R. Skaggs

Activity Date: Throughout year

Accomplishment: Completed.

- Utilize the table top display promoting the Conservation District Program. Utilize the display at events to educate the public about what services the District can offer Pierce County residents.

Lead: Staff

Activity Date: Throughout Year

Accomplishment: Completed.

- Distribute quarterly newsletters and brochures to established sites around the county.

Lead: R. Skaggs

Activity Date: Throughout year

Accomplishment: Completed.

- Help coordinate and sponsor the "Cooperator of the Year" dinner with the Orting Lions Club.

Lead: M. Baden, District Manager, R. Skaggs, NRCS Staff

Activity Date: February 2001

Accomplishment: Completed.

- Continue to update stream sign database. Seek funding to replace and install missing signs. Develop a personnel service contract to help develop this project.

Lead: J. Gordon, District Manager

Activity Date: Throughout year

Accomplishment: Completed.

Program Area: Fish & Wildlife Habitat

Goal: Develop a program to preserve, protect, restore, and enhance fish and wildlife habitat in Pierce County.

Objective: Work to prioritize fish passage barriers county-wide and implement four fish passage projects in 2001.

Pierce County has hundreds of road culverts that either block or hinder fish migration. Many miles of prime stream habitat are un-usable by fish because of these road crossings. These culverts may have been poorly designed, or may not be properly maintained for fish passage. The drop at the outfall may not be the only factor contributing to poor fish passage. The velocity and depth of the water moving through the culvert can also block fish passage. The length and size of the culvert are other factors that contribute to effective fish passage. Culvert projects can be extremely expensive and complex to undertake.

Actions:

- Complete the Fish Passage Inventory for Gig Harbor / Key Peninsulas and prepare a final report.

Lead: M. Cookson, J. Coulthard, Staff

Activity Date: Throughout year

Accomplishment: Ongoing, scheduled completion October 2003.

- Continue to seek funding to begin the Nisqually River Fish Passage Inventory and complete priority index surveys in the Puyallup River watershed and Gig Harbor and Key Peninsulas.

Lead: District Manager, Staff

Activity Date: Throughout year

Accomplishment: Funding secured in SRFB 2nd Round, 2001. Work ongoing.

- Maintain and update culvert inventory databases for the Puyallup and Gig Harbor / Key Peninsulas.

Lead: M. Cookson, J. Coulthard, Staff

Activity Date: Throughout year

Accomplishment: Ongoing

- Continue to submit grants to inventory, prioritize, and implement projects addressing fish passage projects throughout Pierce County. Possible funding sources include Commission Competitive Grants, South Puget Sound Salmon Enhancement Group, Washington Department of Fish & Wildlife, Puyallup & Nisqually Tribes, USDA-NRCS, U.S. Fish and Wildlife Service, National Fish and Wildlife Foundation, and Pierce County.

Lead: District Manager

Activity Date: **Throughout year**

Accomplishment: Ongoing

- Work with the Puyallup Tribe, South Puget Sound Salmon Enhancement Group, Washington Department of Fish & Wildlife, Pierce County, U.S. Fish & Wildlife Service, NRCS, and private landowners to implement **four fish passage projects** in Pierce County.

Lead: **Staff**

Activity Date: **Throughout year**

Accomplishment: Two fish passage projects conducted, in Wilkeson and Lakewood.

- Work with the City of Lakewood and the Washington Department of Fish & Wildlife to solve the Clover Creek fish passage problem. Design concepts include constructing a series of concrete weirs.

Lead: **Staff**

Activity Date: **March – June 2001**

Accomplishment: Completed.

- Work with the lead entities to develop and implement salmon habitat recovery projects. Submit projects through the lead entity for consideration for funding by the Salmon Recovery Funding (SRF) Board.

Lead: **Staff**

Activity Date: **May – August 2001**

Accomplishment: Three projects submitted for funding in Nisqually River Basin.

Objective: Keep working closely with other agencies and organizations to promote programs that preserve, protect and restore fish and wildlife habitats of Pierce County.

Actions:

- Continue working with private groups, individuals, and public agencies to preserve, protect and restore critical fish & wildlife habitat. Look for opportunities in working with cooperators for habitat enhancement.

Lead: **Staff**

Activity Date: **Throughout year**

Accomplishment: Ongoing.

- Explore future grant opportunities to specifically address habitat preservation, restoration, or enhancement opportunities with local entities.

Lead: Staff

Activity Date: Throughout year

Accomplishment: Ongoing.

- Continue to promote the NRCS Wetland Reserve Program, Wildlife Habitat Incentive Program, and Conservation Reserve Enhancement Program as they are available.

Lead: Staff

Activity Date: Throughout year

Accomplishment: Ongoing.

- Use USFWS and WDFW cost share dollars to implement practices on private land addressing key habitat elements.

Lead: Staff

Activity Date: Throughout year

Accomplishment: Ongoing.

- Nominate a Wildlife Farm of the Year for Pierce County and forward nomination to the WACD for consideration.

Lead: Paul Nee, NRCS, Staff

Activity Date: July 2001

Accomplishment: Ongoing.

- Salmon Carcass Planting in streams - Work with the South Puget Sound Salmon Enhancement Group, Puyallup Tribe, Department of Fish & Wildlife, Weyerhaeuser Co. to place salmon carcasses in streams to provide food and increase survival for juvenile salmon.

Lead: Staff

Activity Date: November 2001

Accomplishment: Completed.

Objective: Monitor existing projects at least yearly to determine how they are functioning. Update the District databases (Cooperator Database, Fish Passage Inventory Database) to reflect this information.

Actions:

- Monitor completed fish passage projects using fixed-point photos, WDFW fish passage criteria, and fish presence/absence surveys. Update the Cooperator Database and the Fish Passage Inventory Database.

Lead: Staff

Activity Date: November 2001

Accomplishment: Ongoing.

- Monitor streambank revegetation projects using fixed-point photos, and plant survival surveys. Update this information in the Cooperator Database.

Lead: Staff

Activity Date: November 2001

Accomplishment: Ongoing.

Program Area: Forestry

Goal: Develop a program to serve non-industrial forest landowners of Pierce County

Objective: Provide educational outreach to the non-industrial forest landowners of Pierce County.

Actions:

- Work with the Department of Natural Resource, Natural Resource Conservation Service, and WSU Cooperative Extension and help sponsor two forestry workshops for non-industrial private forest landowners.

Lead: NRCS and District Staff

Activity Date: Throughout year

Accomplishment: Completed.

- Use the District's Cooperator Database to update all existing forestry plans.

Lead: NRCS and District Staff

Activity Date: Throughout year

Accomplishment: Ongoing.

- Develop a technical assistance program for non-industrial forest landowners.

Lead: NRCS and District Staff

Activity Date: November 2001

Accomplishment: Ongoing.

Program Area: The Conservation Reserve Enhancement Program (CREP)

Goal: Provide assistance to landowners interested in enrolling in the Conservation Reserve Enhancement Program (CREP).

Objective: Restore land along waters that are spawning areas for salmon and steelhead stocks.

The Conservation Reserve Enhancement Program (CREP) is part of the Conservation Reserve Program (CRP), which is the federal government's largest environmental improvement program. CREP is voluntary and offers agricultural producers, farmers and ranchers financial payments to restore stream habitats on their land. Initial contracts are for 10-15 years. CREP is made possible through the combined efforts of the U.S. Department of Agriculture and Washington State.

A riparian habitat is an area of trees and/or shrubs next to, and uphill from, water bodies. Riparian habitats are important because they:

- Create shade that lowers water temperatures
- Are a source of woody debris which create pools
- Reduce sediment
- Stabilize stream banks
- Increase wildlife habitat
- Reduce chemicals and nutrients entering streams

The width of riparian habitat will vary depending on soil and tree type for the area (anywhere from 50' to 180').

The cost for developing riparian habitat (installing fences and animal watering stations, planting trees, etc.) will be paid by:

- U. S. Department of Agriculture – 90%
- Washington State – 10%
- Annual payments are 200% of the Farm Service Agency soil rental rates per acre
- For Growth Management Act protected areas, an additional 10% is added

Land eligible for CREP enrollment is land next to critical or depressed salmon spawning areas, used for agriculture production, and is suited for a riparian habitat.

CREP fits into the Governor's Salmon Recovery Plan by fulfilling the habitat portion of the program for agricultural land. In Pierce County, several water courses have been designated as eligible in the Puyallup, Nisqually, Clover-Chambers, and Key Peninsula-Gig Harbor-Islands watersheds.

Actions:

- Provide technical assistance to Pierce County landowners interested in enrolling land in CREP.

Lead: M. Baden, District Manager, NRCS Staff

Activity Date: Throughout year

Accomplishment: Three landowners signed CREP contracts and are receiving technical assistance under this grant.

- Provide necessary technical assistance to Pierce County landowners during the enrollment into the program and the implementation of practices required in the plan. This includes coordination between the landowner, District, NRCS, and Farm Service Agency.

Lead: M. Baden, District Manager, NRCS Staff

Activity Date: Throughout year

Accomplishment: Ongoing.